THE LANCET.

VOL. I.] LONDON, SATURDAY, NOVEMBER 29, 1834. [1834-35.

PHYSIOLOGY.

LECTURES

ON THE

PHYSICAL CONDITIONS

OF THE

TISSUES OF THE HUMAN BODY

AS APPLIED TO THE EXPLANATION OF

VITAL PHENOMENA.

Delivered at the College of France in 1834

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LECTURE IX.

Resumé.—Result of a former Experiment on the Imbibing Powers of either side of the Skin.—Mode of the Formation of Phylctenæ.—The Compressibility of Gases.—The Compressibility of the Solids and Fluids of the Body, especially of the Vertebral Column, of the Articulations of the Lower Extremities, and of the Foot.—Erroneous Treatment of Deformities by "Pressure" and "Support."—Elasticity of Parts as the Antagonist of Compressibility.—Function of the Yellow Tissue as an Agent in the Circulation.—Elasticity of the Arteries and Veins, and the Lungs.

You have now, Gentlemen, seen, from several facts which have been laid before you, that imbibition is a property not confined to membranes in a simple state, such as they are when separated from the animal body, and acting merely as isolated tissues; but that this function is exercised by various membranes of the living body, and operates upon several of the fluids, whether contained in peculiar vessels, or forming a component part of an organ. In proof of this assertion, we cited the well-known phenomenon of cutaneous transpiration, which in certain reptiles takes place to such a degree as to reduce the animal to a perfect state of desiccation; we also adduced as an example the manner in which the eye of a patient labouring under Asiatic cholera resembles that of the dead body, and explained this prominent feature of the disease, by referring to the existence of similar physical conditions in both cases. An eye submitted to your knife in the dissecting-room is shrunk and withered, because the circulation has been arrested, and imbibition of the fluids which in great part compose this organ has taken place; a similarity of condition gives rise to the production of an analogous effect in a cholera patient, whose eye is lifeless, and is often reduced to a mere nothing, from the exhalation of the aqueous particles.

But your attention was particularly drawn to the pulmonary membrane, of which we have already so frequently spoken, and to the manner in which extraneous bodies are removed from the circulation through the medium of that tissue; you witnessed several experiments which demonstrated this fact; I shall not therefore dwell upon it any further, but request you, before passing to the subject which will occupy us to-day, to notice the result of an experiment made about fifteen days ago.

You remember, no doubt, when I spoke of the cutaneous tissue, how I directed your attention to the different effects produced by the two surfaces of the skin on fluids exposed to its action: when the epidermic surface of the skin is placed externally, you have a rapid imbibition through the tissue; but when, on the contrary, the epidermis is placed in contact with the fluid, and the internal surface becomes external, the phenomena of imbibition are exhibited in a very slow and insignificant manner. Here are two large bags of skin taken from the arm of the same subject; in one the external surface of the skin has been allowed to preserve its usual relation; in the other the epidermis is turned inward, and the subcutaneous tissue consequently is exposed to the atmosphere; both bags have been

filled with water; now observe what has taken place within the period of fifteen days, during which the experiment has continued; the one in which the epidermis looks inwardly is nearly empty, and preserves its soft natural appearance, from the constant passage of the fluid through its parietes; you may also remark how the surface of this skin exhibits the phenomenon of the formation of phlyctenæ in various points. This, Gentlemen, is a fact which is not without some interest, for it explains to us how phlyctenæ are formed in the living body by the elevation of portions of the epidermis by fluids which traverse it, and thus reduces the symptom to a physical condition of imbibition. The bag of skin in which the epidermis remains external is, as you see, nearly full, and perfectly dry and hard; imbibition here has not taken place to any extent; the quantity of water remains nearly the same, and desiccation of the tissue has proceeded even to the very surface of the fluid, showing how little of the latter has penetrated the cutaneous membrane.

We shall now pass to a consideration of certain other physical properties which exercise a remarkable influence on various functions of the living body, and endeavour to explain how those properties account in a great measure for several actions or phenomena hitherto too exclusively regarded as vital.

The first to which I would direct your attention is *compressibility*, a property possessed by many bodies in a very eminent degree. Thus a gas may be reduced in volume from a large bulk, so as to occupy a very small space indeed, and when the pressure exercised is considerable, the gaseous substance seems almost to disappear; a tube, containing a pound of gas, may be in great measure emptied by sufficient pressure; compressibility is, therefore, a physical phenomenon belonging to gaseous bodies, which return to their original bulk when the compressing force is removed, and exhibit another quality of no less importance—namely, elasticity.

These phenomena are not exhibited in any remarkable degree by the human body, because gaseous fluids do not enter into its composition, and are only occasionally found either as results of a morbid secretion, or from the decomposition of excrementitious matter; in certain animals indeed, for example birds, we have constantly a quantity of atmospheric air contained in the bones, but we cannot consider this as a component part of the animal's body, because the gas is derived from the external world, and reaches the cavities prepared for its reception through the medium of the lungs and trachea; at each inspiration the cells of the sternum, long bones, and other parts, are filled with atmospheric air, but this phenomenon is connected with the accomplishment of certain actions which are totally foreign from our present subject; we shall therefore pass by the gases, and turn our attention to compressibility and elasticity as exhibited by the liquid and solid parts of the human frame.

For a long time liquids were regarded by natural philosophers as altogether incompressible, but this idea is now completely exploded, and we know that a liquid may be reduced very considerably in volume, whenever a sufficient compressing force is applied. Again, if we examine the solids with respect to this property, and it is to this portion of the body that I propose at present to apply my remarks, we find that some are compressible in a very remarkable degree, while others do not seem to possess the property, and either resist any force applied, or retain the shape and form once produced. Elasticity and compressibility are distributed throughout the organs of the human body, in relation to the different functions which each apparatus may be called upon to sustain; thus many of our organs, both from situation and destination, require to be more or less compressible, and to enjoy a certain degree of flexibility; there are others, on the contrary, which cannot suffer any degree of pressure or constraint without being deranged, or perhaps disorganized. Elasticity also is closely connected with the regular exercise of several functions, and requires peculiar attention on the part of the physiologist as an important property by which various derangements of structure and action in the human body are modified or relieved. We shall, therefore, take a rapid view of the manner in which this physical property of bodies in general belongs to several functions of the human frame, contributing in a great measure to their support, or presenting itself as a powerful remedial agent in cases where they have been disturbed and deranged.

Some parts of the body enjoy the property of elasticity in a much less degree than others; thus the bones are composed of a solid incompressible mass, suited to the functions for which they are destined, and exhibit but feeble traces of being elastic; however, it is easy to prove, that even the most solid bones are possessed of this property. Take a fibula, that bone which you know is destined to give additional strength to the lower limb, and attach a weight to one extremity of it, while the other is kept in a fixed position; by

regulating the weight, you can produce a sufficiently marked curvature in the length of the bone, which bends towards the middle, and returns to its original form as soon as the acting power has been removed. This simple experiment proves a certain degree of compressibility in the concave side of the bone, and the existence of the elastic property in a degree sufficient to restore its primitive form.

The elasticity of hard bodies is developed under three different circumstances, viz., by torsion, traction, or direct pressure upon the substance. Let us first examine those parts of the human body which exhibit elasticity when direct pressure is applied. In turning to this part of our subject, I need scarcely quote to you the spinal column as an example. This osseous pillar supports, as everybody knows, the weight of the body, and transmits it from one component part to another, until the whole pressure falls upon the lower extremities. The effects of this direct pressure, though constantly acting on the spinal column, are never exhibited in any remarkable degree during a healthy condition of the frame; yet it is a very generally received opinion (and one, perhaps, not without some foundation), that the stature is reduced to the extent of a few lines, by a long continuance in the upright posture; in a word, that a man does not measure so much in the evening as he does when getting up in the morning. This is a circumstance taken advantage of by our young conscripts, who sometimes escape enrolment by remaining twenty-four or thirty hours in an upright posture, after which a man, say of five feet six inches, is found to want one or two lines of the required height. However this may be, if the diminution really do take place, the body soon recovers its original dimensions, from the great elasticity of the tissues composing the spinal column in particular, and the other parts destined to support or transmit pressure from above downward.

We might, Gentlemen, follow the different tissues successively submitted to pressure from the head to the heel, from the first articulation of the vertebræ to the junction of the tibio-tarsal joint, and show you how beautifully the effects of this pressure are modified or counteracted by the wise provisions of nature; but these details would occupy too much of our time, which is necessarily limited, we shall, therefore, make selections among the different structures, and dwell only upon those which present the most striking examples of the property now the subject of our attention.

If we examine in their several parts and relations the joints composing the vertebral column, we shall find a mechanism of the most admirable nature. In this osseous pillar, being destined at once to give support to the ground-work of the body, and at the same time to execute movements of flexion, extension, &c., in divers directions, we find strength, solidity, and mobility, combined in the highest degree. The resisting force of the vertebral column may be estimated at once by one even moderately acquainted with the laws of mechanics, and its strength is further increased by various accessary means; in fact, nothing can be more solid than the ensemble presented by the bodies of the vertebræ, their fibro-cartilages, and the different ligaments uniting them; and if you reflect, in addition to this, that the vertebral column is composed of portions of cylinders placed one above the other; that it represents a pyramid in form, the base of which looks downwards; and, finally, that the three opposite curves in the length of the pillar give it sixteen times more power than it would otherwise have, you may form a good idea of its resistance to pressure and solidity.

As the spinal column in totality, and particularly its lumbar and cervical region, enjoys a great degree of mobility, exhibited in the divers motions of flexion, extension, lateral inclination, circumduction, and rotation, the tissues in this part of the body are endowed with a high degree of compressibility and elasticity. Examine the peculiar matter composing the intervertebral cartilages, and you will find this to be the case. Nothing can be more elastic than the white tissue uniting the vertebræ, and mark how the compressibility is distributed in relation to the degree of function required to be exercised by each part.

In all movements of flexion, particularly that forwards, which is the most extensive motion enjoyed by the vertebral column, the fibro-cartilages are necessarily compressed and diminished on the side corresponding with the flexion, while they must expand and be elongated on the opposite side; hence we find these fibro-cartilages much more strong and thick towards the circumference, where the greater compressibility and elasticity are required, than in the centre of their bodies, which is composed of a soft and nearly fluid matter.

If from the vertebral column we pass to an examination of the hip-joint, we find an apparatus almost equally well imagined to avoid the ill effects which might arise from long-continued pressure. The length and obliquity of the head of the thigh-bone contribute to decompose the force

which constantly acts upon the lower extremity. The head of the bone is covered by a dense elastic cartilage, and in the bottom of the cavity destined to receive this part of the femur you have a quantity of soft compressible substance, which acts as a kind of pillow or pod, and resists all violent shocks, while it is at the same time interposed between the articular surfaces to diminish the pressure that otherwise would be occasioned in the joint by the weight of the body on one side, and the fixity of the limb on the other.

The articular and interarticular cartilages of the knee and ankle-joints are also constructed with a view to the same end, namely, to resist the inconveniences which might arise from pressure; this provision is peculiarly remarkable in the semilunar cartilages of the knee-joint, which fulfil the desired object in the most admirable manner, without diminishing the extent or facility of motion in the articulation. The structure and disposition of these cartilages are sufficient to point out their use in the human body: if we wanted further proof, it might be drawn from the manner in which nature sometimes employs additional means of protection, when peculiar circumstances seem to require them. As an example of this, I would cite a case which I saw some time ago at Charenton. A female, possessed by a kind of religious madness, who was confined in that establishment for the insane, was observed to remain the greater part of the day in a kneeling posture; she continued this practice for several weeks, and at length a change in the external appearance of the joint was noticed; the knee appeared swollen and puffy, and upon examination we found that the fatty matter underneath the patella and extensor tendon was developed, forming a thick soft couch, by which the joint was in great measure protected from the ill effect of a pressure that might otherwise have occasioned very disgraceful consequences.

In treating of the manner in which compressibility and elasticity are employed in the human body to promote the activity of various functions, or as remedial means in cases of deranged action, I am necessarily compelled to pass rapidly over the anatomical dispositions by which these properties are developed, because our time will not admit of any extensive details, but I cannot help requesting your attention to the structure of the sole of the foot. Here you will find every means employed to avoid pressure, and if you study the particular arrangement of each part, you cannot but be struck with the wonderful manner in which nature has here provided against the inconveniences that might arise from the constant action of a considerable force on this confined surface. In fact the weight of the body, though supported by the whole foot, falls chiefly upon four points of the plantar surface; these are, the heel, the external edge of the foot, the ball of the great-toe, and the extremities of the phalanges. Now in the structure and arrangement of these several parts, we find a mechanism admirably adapted for counteracting pressure. Under the prominence of the os calcis, which is one main point of support, you may observe a layer of fibro-cellular substance, intermingled with a considerable quantity of dense fatty matter, which forms an elastic thick cushion to protect the bone and soft parts from the constant pressure to which they are subjected. This structure forms an apparatus similar, but infinitely superior, to that which is employed in the construction of certain chairs, where a soft elastic bottom contributes so much to the ease and comfort of a patient, when it is necessary to avoid all pressure on the soft parts. Now study the anatomical disposition of the tissues on the external side of the foot, and you will find an analogous structure designed for the same use. Here you see small masses of condensed fatty substances, united by a strong fibrous tissue, and placed precisely in the situation where it is most required. A similar arrangement exists, though in a lesser degree, under the ball of the great-toe, and on the extremities of each phalanx, which serve as the point d'appui whenever we walk, run, or execute any progressive motion. You are not to imagine, as some anatomists have asserted, that this peculiar structure is developed in consequence of the pressure which acts on the sole of the foot, and does not originally exist as a precautionary means, devised by nature; because we find the elastic cushion of which I speak, under the os calcis and toes of the new-born infant, as you may satisfy yourselves by examining the little subject now before us. Were I to select a part of the body, as an example of wisdom and design, of the adaptation of means to attain a proposed end, I would choose the human foot. In fact nothing can be more beautiful or instructive than the mechanical study of this organ. Even the integument by which it is covered exhibits physical properties in relation to the functions it is destined to perform; the skin is here peculiarly elastic, and covered by a thick layer of epidermis, which, under certain circumstances, is capable of assuming an extraordinary degree of density, and constitutes, in this manner, an additional protection to the soft parts beneath.

Thus, Gentlemen, in the brief enumeration we have made of the several parts destined to support and transmit weight in the human body, you find compressibility and elasticity, two physical properties of bodies in general, combined in a variety of degree to prevent or remedy the accidents resulting from excessive pressure. Facts of the kind which we have just noticed are not only highly interesting, but may afford many useful applications of a practical kind. Paris and every other large capital of Europe abound, as you are all aware, with establishments solely confined to the treatment of deformities, whether congenital or acquired, a species of malady very common in modern times. These orthopœdiac institutions are generally occupied by patients labouring under vitiated formations of the vertebral column or extremities, under the various forms of spinal curvature, shortened limbs, &c., and the curative means almost universally adopted consist in the employment of different mechanical contrivances. But this mode of treatment is not founded on just physiological views, for if we examine the greater part of these malformations, we shall find them depending on a deep-seated affection of the osseous system in general, which we can never hope to remedy by simple mechanical power, because, though the latter may change certain forms of the limbs and thorax, may correct in a great degree the cuvature of a diseased spine, or supply the want of sufficient muscular action, yet acting as it does solely by pressure, it is not calculated to remove the original cause of the disease. The enlightened physician proceeds on a quite different principle; he investigates the evil, not as a simple deviation of form in a hard part, which is cured as soon as the anomalous form has been corrected, but as the consequence of a change in the physical properties of all the organs, and applies himself to attack those vices of nutrition, with their consequent ill effects on the physical conditions of the soft and hard parts of the body, which are the primary and chief source of the disease.

This, Gentlemen, is the main point to be looked to in the treatment of deformities; but, as I before said, in orthopœdiac institutions they neglect this principal cause, and apply themselves exclusively to the correction of the local symptoms. A method of this kind can never be attended with permanent success, because it is founded on partial views, and occupies itself with effects instead of attacking their causes. Be assured the only proper and efficacious system is that which may be built on the changes produced by imperfect nutrition in the economy at large, and in the physical properties of our various organs.

Hitherto, Gentlemen, I have spoken of the manner in which the solid parts of the body are constructed so as to resist pressure, but they also present another phenomenon no less remarkable, viz., the power of recovering their original form when altered by pressure. This property is best exhibited by the vertebral column. Take the spine of a dead subject, and bend it in any direction; you will find it immediately restored to its original form by the elasticity of the tissues which compose the column. The power of readjustment, however, does not depend solely on the solid structure, but is considerably assisted by the cartilages and ligaments, which, as you know, surround this portion of the human skeleton in great numbers, and consists partly in compression, partly in distention, of the latter parts. Thus when the vertebral column is bent forwards, as for example in bowing &c., the anterior portions of the interarticular cartilages are considerably compressed between each vertebræ, while the posterior edges and the ligamenta flava undergo a corresponding or even a greater degree of distention, and the upright posture is reproduced, or, in other words, the column returns to its natural form (independently of muscular action, which we do not notice here, as it is foreign to the subject), by the property of elasticity, redistending the compressed cartilages, and contracting again the elongated ligamenta flava.

Elasticity is also seen influencing the various motions which are executed by the thoracic parietes; in fact, the cartilages of the ribs are highly elastic bodies, and the property is connected in an important manner with the elevation and depression of the chest during respiration; if we required proof of this latter circumstance, we have only to cast our eyes on what takes place in old age, when the cartilages of the ribs, like many other tissues, sometimes become converted into bone; when this occurs, respiration is impeded in a distressing manner, and can only be carried on by the diaphragm, becoming, as it is said, abdominal. An accident of this kind is always attended with considerable inconvenience, if not danger, and makes the great difference between the man of eighty, and the young man of twenty-five, in the full possession of strength, and in whom the functions are not disturbed by any anomalous disposition; even two old men, though of the same age, may show an immense difference of constitution and health, when one has the respiration free and unembar-

rassed, the muscular power, naturally feeble, aided by elasticity of the costal cartilages; while the other is reduced to a state of misery by an impeded respiration, which admits of no remedy, as it depends on an unalterable change in the physical structure of the chest.

We have, moreover, certain tissues in the animal economy, which act only through their elasticity. And here again we must have recourse to the vertebral column for an example. The yellow tissue of the spine, or, as anatomists call it, the ligamenta flava, has been known from time immemorial as possessing this property in a very high degree. We have already noticed the part it plays in restoring the column to its original form during the various motions of flexion, lateral inclination, &c.; where its elasticity contributes not only as a motile power, but also a means to prevent the effects of too much pressure; it is a tissue *sui generis*, composed entirely of elastic fibres, and admirably adapted for fulfilling the object to which it is destined. You have also an elastic membrane in the brain. The falx cerebri, that strong fibrous membrane by which the hemispheres of the cerebrum are separated, possesses the property of elasticity in no small degree, though in a different manner from the tissues of which we have just spoken; its action arises from the way in which it is drawn tensely across the cavity of the skull, and it performs the office of a partition, solid, though yielding, by which the cerebral matter is protected, and the effects of too much pressure on this delicate organ are counteracted. In a word, Gentlemen, we find this physical property of elastic tissues in all the organs of the human body where rapid or sudden change of motion takes place, and it is always proportionate to the nature of the demand; thus it is found in abundance in the vertebral column in that direction where flexion operates most, and this latter you know is the most extensive and quickest motion enjoyed by the spine; and as I have already remarked, the redressement of the column is in a great part due to the elasticity of the ligamenta flava. We also find a similar substance in other points where its presence may be necessary; thus the semilunar cartilages are interposed between the bones composing the articulation of the knee-joint, and by their peculiar structure and arrangement serve as an excellent means of defence in a situation where great pressure exists, and where their function is most required.

The few examples which I have just quoted demonstrate the useful, we might even say, the indispensable part which elasticity plays in the solids of the human frame; but the function of the yellow tissue is most clearly exhibited by the apparatus destined to circulate the blood through the body. The contractile power of the arteries has been attributed by many writers and physiologists to a muscular power residing in the middle tunic of the vessel, but this is a capital error, and has led to the most false and ill-founded conclusions; the property by which the arterial system propels the fluid contained in its various tubes, or, rather, assists the action of the heart, which is the chief, almost the sole, agent of circulation,—this property, I say, resides in the elastic tissue, in the yellow fibres composing the middle coats of the arteries, and is totally distinct and different from a muscular action.

The arterial system presents this elasticity in a remarkable degree, and in every part of its course, from the strong yellow fibres of the arch of the aorta to the smallest ramification which the knife of the anatomists can trace,—in every trunk and in every branch of each trunk,—you will find a quantity of this peculiar matter, and it is not without reason that it has been called elastic, for, as you shall presently see, an artery elongates most readily, returns to its original length, and contracts whenever it is distended artificially, or elongated by traction; and these several effects are solely owing to the presence of the yellow tissue in its middle coat. We shall now, as a proof of what has just been said, develop a considerable pressure in the interior of this little artery, and thus give rise to a corresponding degree of elasticity. One end of the vessel has been tied, and I now inject with considerable force a quantity of fluid from this small syringe, introduced into the other extremity, and you see how greatly the vessel is distended and enlarged; the coats have yielded, so as to increase the diameter of the artery nearly by one half, and if the pressure were removed, you would see how quickly the vessel returns to its primitive form and capacity by an elastic power inherent in it, and not through any vital action residing in a muscular structure, which of necessity must cease after death.

The torsion of arteries, one of the most brilliant discoveries which have been made in surgery for many years, is founded on the elasticity of the middle tunic, but this is too important a point to be treated of towards the end of a lecture; we shall recur to it at length in our next. In the mean time observe the condition of this vessel which we have artificially distended with a fluid, so as to resemble an artery in the living body. Now when

we prick the vessel, and make a small aperture through its parietes, if it be elastic, as we have asserted, a jet of water will be rapidly forced from the interior by the manner in which the elastic tissue returns to its normal state when pressure is removed; if, on the contrary, the middle coat be merely muscular, and possessed of no elastic property, the fluid will remain stationary, as if contained in a tube of metal or other inflexible substance. I now make an aperture in the artery, and you see at once the proof that our theory is correct; the coats of the vessel return on themselves, and force out a jet of water similar to the stream of blood which follows when you open an artery in the living body, with this difference, however, that the jet is continued and not intermitting, because we have nothing here to imitate the alternate action of the heart.

This property, Gentlemen, is not confined to vessels of the caliber of the one on which I have just made an experiment. Whether you take a large or a small one, the aorta or a capillary tube, you find the same well-marked elasticity exhibited by each; in some cases, indeed, the vessels seem to lose a great part of their impulsive power; but this is occasioned by a morbid action which has been set up in the tunics themselves, rendering them inflexible and inelastic, and cannot be quoted as an argument applicable to arteries in a healthy condition.

That portion of the circulating system by which the blood carried from the heart to the periphery of the body is again returned towards the central organ, exhibits, likewise, elasticity in a very high degree. Take a vein, as for example one like this, the main vein of the lower extremity, and exercise traction on its coats; you will find that it elongates considerably,—even more than the corresponding artery, and returns on itself with great elastic power. This phenomenon depends equally on the presence of the yellow tissue, and is exhibited in a peculiar manner by some veins. Thus the saphena vein is very elastic, contracting upon a fluid nearly with the force of an artery, while the deeper-seated vessels of the lower limb enjoy a less degree of elasticity. This difference of structure and function is very remarkable, and depends on the situation of the two vessels. The saphena vein is, as you know, placed superficially under the skin of the leg, and is not supported or covered by muscles and other tissues; it therefore requires an additional degree of elastic power to aid the impulsion of its contained fluid, which in many cases stagnates in the tube, and gives rise to the development of varicose enlargements. The popliteal vein, on the contrary, is deep-seated, in the centre of the leg, supported and surrounded by a couch of muscles, and withdrawn from the operation of all external influences; here, then, the action of the heart is by itself sufficient to keep up the circulation, and no extraneous force is required.

From what has been said, Gentlemen, you cannot fail to conclude that elasticity, a physical property of bodies in general, performs a principal part in one of our most important functions, viz., the circulation of the blood, and exists in every portion of the circulating system. We must, indeed, except the heart, for this is undeniably a muscular organ, but in all the rest, in arteries, veins, and capillary tubes, you will find elasticity aiding the central power, and explaining the various phenomena which are exhibited by this apparatus, whether in a state of health or disease. If you wanted any further proof of the important and extensive part which this property plays in the economy, you might find it in a very simple experiment:—if the lungs of a dog, for instance, be inflated artificially by introducing a pipe into the trachea artery, the elasticity alone of the organ would prove sufficient to expel the contained air; the lung would return upon itself, and exhibit the same volume as before any air was introduced. This condition is essential to respiration, which cannot be carried on in a normal or regular manner without it. It is also important to study it in relation to various diseased states of the lung, for the high elasticity with which that organ is endowed must operate considerably in modifying the symptoms of disease, and should, on that account, be submitted to a peculiar and close study on the part of the physician.

We have now, Gentlemen, examined the different effects of elasticity, as seen in the circulation of the blood from the heart to the minute branches of the arteries, and thence to the veins. In our next we will follow up the development of this subject, and show how it leads to several useful and practical results.

Ducal Doctors.—In the list of the College of Physicians for the year 1771, the Duke of Richmond and the Duke of Montague appear as fellows. It is recorded of one of them, that he rendered himself nearly a perfect physician by devoting himself altogether to the study of medicine. They could not have been lawfully elected into the fellowship, unless they intended actually to practise in London.—(Error. Ed. L.)—*Mr. Wilcock's Evidence, page 249, Lancet edition, Parl. Med. Evid.*

CLINICAL OBSERVATIONS ON *VARIOUS DISEASES*, BY MR. WARDROP.

A REMARKABLE LUSUS OF THE LACHRYMAL ORGANS AND CONJUNCTIVA.

Deviations from the natural structure, whether from malformation or from disease, often assist in establishing very important physiological truths.

The following account, therefore, of a lusus of the lachrymal organs and conjunctiva becomes worthy of notice, not only from its singularity, but by illustrating in a very remarkable manner the functions of the tears, and also affording a beautiful demonstration of the extension of the conjunctiva over the cornea,—an anatomical fact which some have disputed, but which I have attempted in another place to establish, both from an examination of the natural structure of the cornea, and more particularly from the phenomena of its diseases.*

The subject of this remarkable lusus was a female, who, when brought to me, had reached her twentieth year, and appeared to be in every respect healthy.

About three days after birth, it was remarked that her eyes had not the usual lustre of those of other infants, and that they looked opaque and dry, being completely deprived of tears, even when the child was labouring under the most violent passion or affliction. These deviations from the natural appearance became more and more distinct as she advanced in life, but for many years her eyes had undergone but little change.

When I examined them, instead of finding the eyeballs moistened with tears, the whole conjunctiva appeared to be converted into a dry cuticle, resembling a thin dried bladder, sufficiently transparent to permit the sclerotic coat and cornea to shine through it, and be distinguished from one another, but so opaque as to destroy vision, as she was able to see merely the outline of large objects.

On tracing the conjunctiva from the eyeball over the palpebræ, it presented the same shrivelled and dried appearance, but instead of extending posteriorly, as in the natural eye, there was a deficiency in that prolongation of the membrane, so that the eyelids adhered to the globe, and neither could be separated far from it, nor could the edges of the eyelids be brought sufficiently together to cover the eyeball. She was observed always to sleep with her eyelids open, and when she attempted to shut them, she experienced a good deal of uneasiness, while the frequent endeavours to do so produced a tendency to entropium of the upper eyelid. The natural sensibility of the corneal and sclerotic conjunctiva was so much diminished, that the surface of the eye when touched gave but very slight uneasiness. The lachrymal punctæ of each eye were open, and I could squeeze through them, from the lachrymal sac, a small quantity of a sebaceous fluid.

Both eyeballs appeared of the natural form, and to have that rolling motion which is so common in the eyes of persons born blind. The sense of smell was sufficiently acute, but though the application of stimulants produced the usual effect on the olfactory nerve, they had not the least influence in moistening the conjunctiva of either of the eyes.

As it seemed probable that the change in the structure of the conjunctiva arose entirely from an absence of the lachrymal fluid, and as there was no reason to believe that the want of tears arose from any defect in the organization of the lachrymal glands, but from a defect in the usual place where the lachrymal ducts terminate in the upper eyelid, these adhering to the eyeball and thus effacing the lachrymal puncta, it occurred to me that if an artificial opening was made between the eyeball and lid, extending into the lachrymal gland, an artificial channel for the tears might be established. I considered such an operation as likely to succeed, from having several times seen a salivary fistula unintentionally formed after removing, along with tumours on the cheek, some of the lobules of the parotid gland. The lachrymal gland being, like the parotid, of the conglomerate kind, it seemed reasonable to expect that a wound made into its substance, and not allowed to adhere, would be followed by the formation of a lachrymal fistula. Besides, it is well known how readily the contents of the rectum or bladder pass into any new channel when their contents cannot be discharged by the natural outlets. These considerations induced me to perform the following operation in this case.

I introduced a thin sharp-pointed knife between the eyeball and tarsus, towards the upper and temporal angle of the right eye, pushed it forwards at the place where the natural ducts are situated, and carried it to the site of the lachrymal gland, at which place I made a free incision;—a

* See the "Morbid Anatomy of the Eye," vol. 2.

good deal of blood flowed from the wound, and I afterwards introduced into it a piece of lint, with a view of preventing the adhesion of its edges.

On the following day the eyelids were much swelled, and she complained of so much pain in the wound that I removed the lint. The whole surface of the conjunctiva had now become moistened and pliable, but whether this was occasioned by a puriform or a lachrymal discharge I could not ascertain.

A remarkable change, however, had already taken place in the sympathy between the lachrymal gland and those organs which are supplied with nerves from the third branch of the fifth pair. Stimulating substances when applied to the nostrils, and which formerly acted alone on the Schneiderian membrane, on the evening of the operation gave her severe pain in the site of the lachrymal gland and adjacent part of the head, followed by convulsive coughing. The repetition of the use of vapour of ammonia on the day following seemed to occasion great distress; besides, she also complained of a severe pain in the right ear, which was much increased when smelling the ammonia. I advised her frequently to use the ammonia, with a view of stimulating the gland.

On the second day the swelling of the eyelids was much abated, and on introducing a probe it passed readily to the bottom of the wound, and the part which could be seen was covered with lymph. The whole surface of the conjunctiva was moistened, and the cornea of this eye appeared much bluer than that of the other. The application of the ammonia continued to give her pain in the site of the lachrymal gland.

Unfortunately I was never able to ascertain any further account of this patient, or the result of the operation, as she did not again return to my house, and I did not know her abode. The case, however, as far as it goes, is not without interest, for it seems to me indisputably to demonstrate the true nature of the external lamina of the cornea, and to give a most satisfactory explanation of some important phenomena in its diseases.

The knowledge of the mode of restraining hemorrhage, by producing contraction of the bloodvessels, by forwarding coagulation, and especially by producing contraction of the uterus itself, is of infinite importance to accoucheurs, and a vast number of women are lost every year by the ignorance of persons upon this subject. A bad practitioner will lose 19 out of 20 of his cases of hemorrhage; a good one will hardly ever lose a case.—*Sir Charles Clark, p. 236, Lancet edit. of Parl. Med. Evid.*

CALCULUS IN THE BLADDER.—INCONTINENCE OF URINE.—VESICO-VAGINAL FISTULA.

ADVANTAGES OF THE

GILT-WIRE SUTURE.

To the Editor of THE LANCET.

SIR,—I send you the annexed case, not so much on account of the intrinsic interest of the case itself, as for the purpose of introducing to your notice, and through you to the notice of the profession, the use of the gold wire, or, rather, silver-gilt wire, suture, which I have used on a variety of occasions with uniform advantage. I am, Sir, your obedient servant,

M. GOSSET.

George Street, Mansion House,
Nov. 21, 1834.

Case.—In January last, I was consulted by Mrs. H., to whom I was introduced by Mr. Morton, a surgeon, residing in Spitalfields. She was forty-five years of age, had ceased to menstruate about twelve months, and informed me she had suffered from an incontinence of urine (the whole of which passed per vaginam) during eleven and a half years, the result of an injury she received whilst in labour, but that for more than a year, in addition to the distress she experienced from the constant flow of urine, she had suffered severe pain in the loins and bladder, attended with a constant bearing down, as if (to use her own expression) her body was coming from her.

On introducing a sound into the bladder, I found the aggravation of her symptoms was occasioned by a large calculus which had formed within the bladder, and which, on introducing my finger into the vagina, I could feel distinctly through the fistulous opening by which the urine flowed. Instead, therefore, of operating in the usual manner, I determined to dilate the opening already established, and to remove the stone through it. On Jan. 24, having bound her with the lithotomy garters, upon a table of convenient height, I introduced a straight staff through the urethra into the bladder, and from thence into the vagina, and dilated the vesico-vaginal fistula with a probe-pointed bistoury, till it was of sufficient extent to admit of the ready introduction of the forceps. The stone being soft broke into several pieces, it therefore became necessary to introduce the forceps several times, and afterwards to use the scoop, before the bladder was completely cleaned, and in order to get rid of any sand which

might still remain and form the nucleus of another calculus, an elastic-gum catheter was, for several days, introduced through the urethra into the bladder, and warm water injected, which flowed into the vagina, carrying with it any deposit which might adhere to the coats of the bladder. The removal of the calculus relieved her from the pain which she had previously experienced, but the incontinent flow of urine continued unabated after she had recovered from the effects of the operation. I thought it prudent, nevertheless, to wait for some time before I attempted any operation for her further relief, and it was not before the 19th of May that I operated for that purpose. Having placed her on a firm table of convenient height, covered with a folded blanket, and resting on her elbows and knees, the external parts being separated as much as possible by a couple of assistants, so as to bring the fistula, which was immediately above the neck of the bladder, into view, I seized the upper part of the thickened edge of the bladder which surrounded the opening, with a hook, and proceeded with a spear-shaped knife to remove an elliptical portion which included the whole of the callous lip surrounding the fistula, the long axis of the ellipsis being transversely; this was readily effected, but in consequence of the very contracted state of the parts, the next steps of the operation were with difficulty executed, and I should not have succeeded in passing the sutures, had I not used needles very much curved, and a needle-holder which I could disengage at pleasure, the needles being withdrawn with a pair of dissecting forceps after the holder was removed. In this way three sutures were passed, and afterwards, by twisting the wire, the incised edges were brought into contact, and retained in complete apposition until they had firmly united. One of the sutures was removed at the end of nine days, the second at the end of twelve days, and the third was allowed to remain until three weeks had expired, before it was withdrawn. After the operation she was put to bed, and desired to lie upon her face, an elastic-gum catheter, having a bladder secured to its extremity for the reception of the urine, being introduced and retained by means of tapes. She had not the slightest discharge of urine through the vagina after the operation, which has completely succeeded in restoring the healthy functions of the parts.

The advantages of the gilt-wire suture are these. It excites but little irritation, and does not appear to induce ulceration with the same rapidity as silk, or any other material with which I am acquainted; indeed it has scarcely any effect of the kind, except when the parts brought together are put much on the stretch; you can, therefore, keep the edges of a wound in close contact for an indefinite length of time, by which the chance of union is greatly increased. I have used it now, in very many operations, as after the extirpation of the breast, tumours of various kinds, and for bringing the lip together after the removal of a cancerous growth, in all of which cases it answered extremely well. In the larger operations above mentioned, I do not, however, particularly recommend it, as there is more difficulty in applying it than the common suture. It is in minute and delicate operations, such as hare lip, staphylorraphia, and for the closure of fistulous openings, where success mainly depends upon a speedy union of parts, that the advantages of the gilt-wire suture are most manifest.

ENORMOUS

ANEURYSM OF THE AORTA

SIMULATING LUMBAR ABSCESS.

To the Editor of THE LANCET.

SIR,—The following case of aneurysm of the aorta is possessed of more than ordinary interest, from two circumstances: first, from its enormous size; and, secondly, from the fact of its having been mistaken by several most able and experienced practitioners for lumbar abscess. I shall detail the principal features with as much brevity as is consistent with a clear conception of its most prominent characters.

I am, Sir, your obedient servant,

S. W. FEARN.

Derby, Nov. 18th, 1834.

Case.—Mr. S., a gentleman employed in a mercantile establishment, and accustomed a good deal to sitting at his desk, about two years before his death began to complain of lassitude and indisposition to active exertion. He had considerable pain about the lower part of the dorsal region, and tenderness over the spinous processes of several of the lower dorsal vertebræ. He had also dyspeptic symptoms, and complained occasionally of pain and numbness of the lower extremities.

For these symptoms he was put upon a mild regimen. Leeches and counter-irritants were applied to the back, and such other remedies were prescribed as were deemed most likely to contribute to effect

a change in the general disorder of his health. He was, however, but little relieved, and matters went on thus for several months, when a tumour began to present itself in the left lumbar region. This kept progressing, and his sufferings generally were so much increased, that he was obliged to confine himself a good deal to the house.

The tumour continued to increase, and in addition to its appearing in the back, it seemed disposed to point in the inguinal region, which became exceedingly painful, as also was the thigh, from the pressure on the anterior crural and external cutaneous nerves. Fomentations and leeches in abundance were applied to the groin, and opiates were freely administered. All this time there had been nothing unusual in the state of the pulse,—that is, no intermission or fluttering, to lead to a suspicion of disease of the vascular system.

The swelling had at last attained an enormous size, and from its encroachment upwards, gave rise to considerable difficulty of breathing. The existence of fluctuation was suspected in the back, though there was some difference of opinion as to whether there was fluid or not. However, as an exploratory measure, a puncture was cautiously made, about midway between the last rib and the crest of the ilium. At first nothing escaped, but upon reintroducing the lancet, a small stream of very florid arterial blood gushed out, and at once put an end to all controversy as to the real nature of the case. The opening was closed by a pad and adhesive plaster, and in a few days had healed, no evil seeming to have resulted from it. The patient went on in the same way for several weeks longer, when one day whilst sitting up in bed, he suddenly complained of a feeling as if something had given way in his inside, became faint, and very shortly expired.

I should mention, that after the puncture had been made, a stethoscope applied over the tumour discovered the most marked "bruit de soufflet."

Autopsy.—On viewing the body, the tumour presented the following appearances. It was bounded above by the ribs and ensiform cartilage, below by the pelvic cavity, behind by the spine, and it extended anteriorly as far as the umbilicus. Fluctuation was very evident at its posterior and lower part, where its parietes seemed to have become very thin. On cutting into the abdominal cavity, it was ascertained that the sac had given way by a small slit-like opening, opposite the junction of the os innominatum with the sacrum, and a considerable quantity of blood, partly coagulated, had escaped. It was covered in front by the peritoneum, was adherent below to the psoas and iliacus muscles, and passed so far upwards into the cavity of the chest as materially to impede the expansion of the left lung. The artery was found to have first become diseased where it passed over the two last dorsal and the first lumbar vertebræ, all of which had undergone much absorption, though they were still covered by the posterior wall of the vessel, which was very attenuated. The tumour, of course, contained large masses of the usual fibrinous coagula, and altogether could not have been smaller than a uterus at the full period of gestation.

The preparation is preserved in the collection belonging to our Infirmary. The heart and other viscera were healthy.

Remarks.—It has long been my opinion that we may frequently contribute as much to the advancement of medical knowledge by the history of cases in which we may have formed erroneous notions, or in which, from relying too much upon general appearances, we have overlooked their more minute and important bearings, as by the recital of cases of a more ordinary kind, where nothing untoward has happened, and where everything has gone on smoothly from their commencement to their termination. In this opinion, I trust I am borne out by the case I have narrated above. There is no quality of the mind so necessary for arriving in doubtful cases at a correct diagnosis, as extreme caution, and a determination to sift to the bottom, and to investigate with the most scrupulous scepticism, every possible feature of the evidence which is to guide us in deciding on the nature of the disease under our examination, and in devising and executing our plans for its alleviation and cure. In the present instance, if the stethoscope had been used early, it would at least have led to a suspicion, if not to a positive conclusion, as to the real nature of the disease; though I am aware that the same sound might have been heard from any tumour seated over and making pressure upon a considerable arterial trunk. At all events, the additional light furnished by the stethoscope would have been important, and, I trust, the eyes of all medical men are becoming daily more open to the advantages derivable from its use, not only in doubtful tumours, but most especially in the investigation of all disorders of the thoracic viscera.

I should not forget to say, that the above case occurred in a patient of my uncle (Mr. Wright), and that I have his permission to give it the publicity it will obtain by publication in the pages of THE LANCET.

OSTEO SARCOMA

OF THE

LOWER JAW-BONE.

WITH

REMOVAL OF A GREAT PORTION OF THAT BONE.

To the Editor of THE LANCET.

SIR,—As operations for the removal of considerable portions of the lower jaw are at present by no means commonly practised in this country, although their safety and utility have been fully demonstrated by Messrs. Dupuytren, Cusack, Hodgson, and others, the following case may possibly prove interesting to some among the numerous readers of your valuable and widely-extended Journal. Should you think so, its insertion will oblige your obedient servant,

JOHN ALLPORT, M.R.C.S.,
Formerly House-Surgeon to St. Bartholomew's Hospital.

Lichfield, Nov. 24th, 1834.

Case.—Jane Walker, of Stapenhill, near Burton-on-Trent, a robust young woman, twenty-two years of age, afflicted with osteo-sarcoma of the lower jaw, requested my opinion on the 5th of September last. She informed me that the swelling commenced about two years ago, near the angle of the bone, with considerable uneasiness, which she compared to the cutting of a wise tooth; that as it increased in size she had applied to many medical men, some few of whom (Mr. Wood of Birmingham in particular) had advised its removal, to which she was then unwilling to consent; and others had recommended a variety of applications, all of which had proved either useless or injurious; that last spring she had been an in-patient of the *Derby Infirmary* for the space of ten weeks where the prevailing opinion of the medical gentlemen appears to have been against amputation; that of late, feeling much alarmed by its rapid increase, she was ready to submit to any measure that held out a prospect of relief.

The left cheek was greatly distended, and the mouth drawn to that side by the morbid growth, which had pushed out the molar teeth and posterior bicuspis in its progress, and disabled her from closing the jaw. It partially filled the cavity of the mouth, and projected within the ramus of the bone so as to impede deglutition, and during sleep respiration was materially obstructed.

I strongly advised its immediate removal, and as Dr. Rawson of this city, whom she also consulted, fully concurred in the propriety of the measure, and urged the danger of delay, she cheerfully acquiesced, and that day week, Sept. 12th, I accordingly performed the operation by her own request at Stapenhill, in presence of Dr. Rawson, Mr. W. Birch of Barton-under-Needwood (late teacher of midwifery at *St. Bartholomew's Hospital*), and Messrs. Whately, Belcher, Allen, Hodson, and Greaves, of Burton-upon-Trent.

Operation.—I began by slitting up the lower lip in the line of its commissure with a double-edged scalpel, extending the incision downwards close upon the bone underneath the chin; I then commenced a second incision, a little in front of the meatus auditorius externus, carried it down to the bottom of the tumour, and thence forwards along its base until it joined the first. Having extracted the right central incisor tooth with a pair of Hawk's bill forceps, I next pushed my knife into the mouth behind the chin, and immediately commenced the division of the bone at the symphysis with a common metacarpal saw, but was compelled to relinquish it for Hey's straight-edged saw, as it proved too weak for the purpose.

The bone being sawn through, I proceeded to reflect the flap formed by the lower lip, cheek, and masseter muscle, upwards, until the tumour was laid bare. In doing this the facial artery was divided and tied at both ends; the anterior auricular, and some muscular branches also, required ligatures.

The next step—viz. exposing the ramus of the bone, so as to apply the saw, was somewhat troublesome, owing to the bulk of the disease pressing on the large vessels of the neck. Having however, by careful dissection close on the tumour, succeeded in passing, first the handle of the scalpel, and then a finger, into the mouth, I changed my position, stood up behind the patient, and introducing the fore-finger of my left hand, divided the bone upon it with Hey's saw just at its bifurcation into the condyle and coronoid process.

The diseased mass being now loose, Mr. Birch, who kindly lent his able assistance, drew it forward, so as to permit me to detach it from its muscular connexions from before backwards, until it hung by the pterygoideus externus, which was the last attachment requiring to be divided.

The poor girl bore the operation, which occupied thirty-five minutes, remarkably well, and sat up till the flap of the cheek was carefully replaced, and secured by a few stitches, and the lip exactly approximated and kept in apposition with needles

in the usual manner. No medicine whatever was required, and when I next saw her, three days afterwards, she seemed so comfortable in every respect that I would not disturb the dressings; nor were they removed till the seventh day, when the wound was found completely united from end to end. The tumour, of which I enclose a slight sketch, measured twelve inches in circumference from before backwards, and rather more than nine laterally. It weighed nearly ten ounces avoirdupois. On cutting it open (which partially required the aid of the saw), the bone appeared to be completely destroyed; but the osseous lamellæ interspersed throughout its substance abounded more in a central line corresponding with the original direction of the bone, and in the circumference, than elsewhere.

Anterior view of the tumour, turned a little on one side to show the section of the bone at the symphysis.

The section of the ramus cannot of course be seen in this direction, nor was it possible to show both sections distinctly in one sketch.

The smooth portion in the centre is covered by the mucous membrane of the mouth.

P. S. Nov. 23. Some time after the operation I was informed, by Mr. Whately, who kindly attended Walker during her convalescence, that she had unluckily had an attack of erysipelas in the face, but that it quickly yielded to antiphlogistic treatment. Since then I have myself seen her again, and found her so far recovered that little deformity was observable. The cheek remained somewhat swollen, and the mouth was drawn a little to one side when she smiled or talked, owing to the loss of balance in muscular power; but the cicatrix was perfectly sound, she spoke very distinctly, and could readily protrude the tongue, and she ate a slice of bread-and-butter, to show how well she could masticate.

MALFORMATION OF A FŒTUS.

To the Editor of THE LANCET.

SIR,—The following case of malformation may, possibly, possess sufficient interest for those who are engaged in the study of the physiology of the fœtus and its malformations, to ensure its publication in your valuable journal. I am, Sir, your obedient servant,

T. B. BARRETT.

Stone, Staffordshire,
Nov. 1834.

A short time since I was called to attend Mary C., who was in labour. I found her labouring under strong pain, with a natural presentation. After the head and shoulders had passed the external orifice, I discovered that the vagina contained a large tumour which was attached to the child's abdomen; having made very gentle exertions, I succeeded in bringing away the lower extremities with the tumour uninjured. The placenta was almost immediately expelled. The tumour proved to be an immense ventral hernia, situated upon the right side of the child's abdomen. There was no common integument over its surface; it was merely covered by a reflexion of the amnion and its peritoneal sac, which were very thin and transparent, and through which the viscera were very plainly seen. The superior part of the rectus muscle was wanting, and through the consequent space, and the tendinous portion of the abdominal muscles, the viscera protruded. The sac contained the liver, the stomach, the spleen, the funis, all the small intestines, and the greater part of the colon. These were all much inflamed, and adhered to each other by coagulable lymph. They also adhered to the sac by strong vascular bands. The liver was very large, and situated anterior to the other protruded parts. Its right lobe was turned upwards, and pointed towards the right shoulder; the left lobe was small, and turned towards the pubis. The stomach was placed beneath the liver, and much drawn from its natural situation. The spleen was upon the front surface of the stomach. The small intestines occupied the right side of the tumour. There were two appendices, the additional one (marked *c*, *Fig. 1*) was placed about three inches above the termination of the small intestines; it had a very distinct valve. The colon had no ascending portion; the whole of it passed in a transverse direction along the inferior surface of the tumour, towards the rectum. The position of the

kidneys was entirely changed; they were turned upside down, with their renal glands towards the pelvis; they were also much nearer to each other, and lower down, than natural. There was a communication between the cavities of the chest and the abdomen, the anterior part of the diaphragm on the right side being found wanting. The pleura and peritoneum were continuous. The spine was much distorted towards the right side, which caused the right shoulder to be considerably elevated. (*Fig.* 1.)

Fig. 1.—*a*, The heart seen projecting below the sternum.—*b*, The liver.—*c*, The additional appendix.—*d*, Appendix vermiformis.—*e*, *e*, *e*, The amnion.—*f*, The funis.

But what appeared to me the most remarkable anomaly was the position of the heart and the variety in the distribution of the vessels proceeding from that organ; the heart was partly in the chest and partly in the abdomen, and could be seen projecting below the sternum, under the integuments of the abdomen (*Fig.* 1, *a*). The cartilaginous margins of the false ribs on the right side were hollowed out, forming a considerable concavity towards the abdomen, for its reception. The pulmonary artery was very large. It not only divided into its right and left branches, but proceeded upwards, forming a large arch; it then descended, occupied the usual situation of the aorta, and gave off the arteries to the trunk and lower extremities, according to the usual distribution of the aorta. The ductus arteriosus arose from the upper part of this anomalous pulmonary arch, and from the very centre of the ductus arteriosus was given off the left subclavian artery (*Fig.* 2, *e*). The aorta proceeded almost in a straight direction upwards; shortly after its junction with the ductus arteriosus it divided into two branches, the arteria innominata for the right side, and the left carotid, and these were all its branches. (*Fig.* 2.)

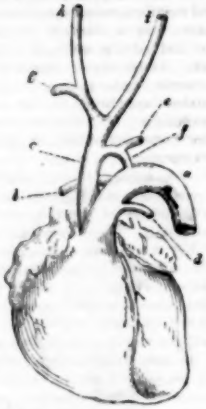

Fig. 2.—*a*, The arch formed by the pulmonary artery.—*b*, Right pulmonary artery.—*c*, The aorta.—*d*, Left pulmonary artery.—*e*, Left subclavian.—*f*, Ductus arteriosus.—*g*, Right subclavian.—*h*, Right carotid.—*i*, Left carotid.

CHEMISTRY AND TOXICOLOGY.

To the Editor of THE LANCET.

SIR,—As I consider that it is particularly important that every fact at all connected with medico-legal subjects should be generally known in the profession, I beg to forward the present communication for insertion in your journal. The strides which chemistry has of late years made, have been exceedingly rapid and highly gratifying. The French chemists especially have, by their researches, contributed towards the elucidation of the important phenomena of this science.

Chemists in their labours do not possess a more powerful agent than electricity, a fact which is well established in the first volume of a work by M. Becquerel, treating exclusively on its laws and those of magnetism, and which a few facts transferred from the pages of that work to your own will illustrate. On the 13th of January, 1834, MM. Pelletier and Couerbe presented a memoir to the Academy of

Sciences containing a new analysis of the *cocculus indicus* (*menispermum cocculus*), in which they announced that they obtained, by the action of the pile, *picrotoxine* (one of its immediate principles) crystallized. In this principle they recognised the properties of *an acid*, inasmuch as it combined with alkalies. They submitted an aqueous solution of *picrotoxine*, slightly alkalized by potassa, to the action of the pile. After half an hour's action, picrotoxine, in finely crystallized needles, was deposited on the positive pole, and a solution of potassa, completely destitute, was found at the negative pole. They also submitted *picrotoxate of brucine* to the action of the pile; the picrotoxine appeared in the form of radiated crystals at the positive pole, and the brucine was deposited in granular crystals, on the negative wire. The *picrotoxates of strychnia, quinia, cinchonine, morphia, narcotine*, &c., were also submitted to the action of the pile, and were similarly affected. They have, moreover, remarked that the action of the pile turns *brucine to a red colour*, whereas it *does not affect morphia*. These may serve to distinguish these two alkaloids, both of which are turned red by nitric acid.

An important fact in toxological science may here be advantageously mentioned. M. Raspail, in his "Chimie Organique," in alluding to the fallacies of the tests for morphia, says,—"According to the treatises on toxicology, the presence of the alkaloids, more particularly of morphine, is ascertained by the following characters:—it is reddened by nitric acid, and becomes blue by the action of the salts of iron; it is insoluble in cold water, and, according to some authors, in ether; it is soluble in alcohol, and precipitable by ammonia, and, like most of the alkaloids, it restores the colour of turnsole reddened by an acid. But Bonastre has already shown, and I have verified the remark, that all these characters taken together are very deceptious. The concrete part of the oil of cloves is white, crystallizable, insoluble in water, and soluble in boiling alcohol, it becomes blue by the action of the salts of iron, and red by that of nitric acid, exactly as morphine does; ammonia precipitates it; and, if it were kept some time in ammonia, it would assuredly give signs of alkalescence." The circumstance is well worthy of attention. Cloves are used for various culinary purposes; hence, oil of cloves may be found in the stomach of a person supposed to be poisoned. The test apparatus being produced, to what conclusion would the chemist who is unaware of these facts come? Why, that the deceased had been poisoned by a salt of morphine or by opium, and he would deliver his opinion accordingly, to the injury perhaps of some innocent person.

The examination of the form of the crystals by the aid of the microscope was at one time proposed as a test for the various alkaloids; but the fallacies to which such a mode of investigation was liable soon became evident, and like most other hypothetical suggestions, was quickly abandoned. For example, the secondary form of the crystals was modified according to the quantity or nature of the menstruum employed, the length of time occupied in evaporation, or the purity or impurity of the alkaloid base subjected to inspection. The crystals, for instance, of quinia, obtained from its alcoholic solution, resemble very much the crystals obtained from an aqueous solution of narcotine. The researches of M. Becquerel will, I should suppose, set aside the opinions of those chemists who suppose that the vegetable alkalies do not exist ready formed in the substances from which they are obtained. To decide this question a solution of opium was submitted to the action of the pile; numerous flocculi, in a short time, were deposited in granular masses at the negative pole, whilst a few light flocculi appeared at the positive pole. By dissolving the substance deposited at the negative pole in alcohol, and evaporating the solution, crystals of morphia were obtained. The substance obtained at the opposite pole presented all the characters of meconic acid.

The toxicologist will, in electro-galvanism, find a fertile source for the improvement of his science; and I feel assured, that this powerful agent will contribute as much to the improvement of medico-legal analysis as it has done to general chemistry. I am not surprised at the apathy which medical men evince towards the cultivation of this science, when it is notorious that their evidence is often treated with contempt by ignorant coroners, and their loss of time and trouble are repaid only in the most meagre coin, if acknowledged and paid for at all. I am, Sir, yours respectfully,

WILLIAM MEADE, M.R.C.S.

32, King-street, Borough, Nov. 1834.

KING HARRISON'S HOSPITAL.—There have frequently been more Licentiates attached as physicians to Guy's Hospital than to any other hospital in London. The constituency of the various hospitals varies very much, as respects their being more nearly allied to close boroughs, or open to popular election. Guy's is the closest of all. It is beyond the reach of the Fellows of the College of Physicians as active canvassers.—*Dr. Elliotson's Evid.*, p. 141, *Lancet edit. of Parl. Med. Evid.*

MEDICAL PATRONAGE.

To Henry Warburton, *Esq., M.P.*

Sir, The distinguished part which you have taken in the reformation of the medical code, and the deep interest which you feel in all that relates to the improvement of the profession of medicine in these countries, supersede the necessity of an apology for addressing you publicly on my present subject. It has ever been the lot of those, whose patriotism or benevolence has identified them with the opinions and prospects of any particular department of society, to see their names employed, whether agreeably or otherwise, for the extension of such principles and the furtherance of such objects, without ceremony or reserve. Notwithstanding the justification of the practice by precedent, I cannot help expressing the hope that in pursuing a similar course I shall be as far from trespassing on your wishes as I am from transgressing the limits of immemorial usage. But though I should miscalculate on this topic, I am sure I cannot err with respect to my own intentions, or to the sense which I entertain of the inestimable services which you have rendered to the advancement of the cause of medical reform. Directed by these views, and impressed with the conviction that whatever tends to the welfare of society, and the disenthralment of science from the shackles with which it has been so long encumbered, I shall proceed without further remark in forwarding the progress of that great principle, the triumph of which the withered arm of an obsolete and defeated system would now vainly retard, but cannot finally prevent.

In a former letter I stated that I would probably attempt to point out the means by which some of the obstacles to a satisfactory adjustment of the question of medical reform might be obviated. Much of the difficulty with which the settlement of this subject is attended arises from the vast number of apparently unconnected grievances requiring redress, the reduction of them to one proper and general cause, and the discovery of some ordonnance, the operation of which might lead to their entire abolition. The mind, indeed, distracted by the consideration of such a multitude of evils, falls almost necessarily into the error of supposing each item in their long and gloomy catalogue to depend on a separate cause, and to demand a distinct remedy. Though this mode of viewing the abuses which degrade and disfigure the medical profession be natural, and to a certain extent correct, yet it would be totally unsuited for legislative purposes. An entire Parliamentary session, and a whole statute-book, would not suffice for the correction of the present medical code, conducted on such principles. Fortunately, however, this circuitous method of proceeding is not essential, as a careful analysis of the multitudinous imperfections of medical government will demonstrate that a great majority of them is referable to a common origin, and admits of the application of a common law for their removal. We have, besides, been quite long enough complaining of, and contending with, individual outrages of this kind on our rights and our opinions,—outrages which, multiplying by the measures hitherto taken for their removal, have at length brought us to the conclusion of the traveller who, assailed by a swarm of mosquitoes, fancied that if he destroyed those immediately around him he would escape future annoyance, until informed by a native more experienced in the habits of such pests, that if he only killed one of them thousands of others would crowd to its funeral. So it has fared with the medical profession to the present hour; every effort to rid itself of the abuses of its government has given birth to others more numerous and pernicious. It is time, therefore, that we should apply ourselves to the *genus* and the *marsh*,—to the destruction of the *race* in its *source* (for the *species* is indestructible in detail), if we mean to free ourselves effectually from the influence of these evils. An experiment of this nature shall be the principal object of the subsequent reflections, in which I shall endeavour to trace an extensive class of these grievances to a common cause; and to point out to your notice one common remedy. If in this way the ground for a better structure be cleared of its impurities, and the quarter from whence even a portion of the materials for its completion be indicated, I shall not deem the undertaking or the use of your name wholly unjustifiable by the result.

One of the greatest evils which at present afflicts the medical profession is patronage. It extends through, distracts, and degrades every department of that profession, from the *Regius* professorship of an universisy down to the office of a dispensing apothecary to a parish poorhouse. There are no abilities, acquirements, or virtues which may not, and have not, suffered under its blighting influence; there is no shade of stupidity, of ignorance, or of moral depravity, which this destructive system may not, and has not, elevated to the highest offices which can be occupied by the followers of the science of me-

dicine. It is the evil genius of our art or avocation which, inverting the natural order of things, makes anarchy and injustice the rule of its operation, and renders it a matter of perfect indifference to those within the sphere of its noxious power whether nature has raised them above or depressed them below the ordinary intellectual level of their species, whether they have stored their minds with the hard-earned fruits of study and observation; and, so far as their mere success in life is concerned, whether their conduct towards their fellow-men is hallowed by benevolence, or desecrated by selfishness and imposture. In short it has reduced the profession of medicine in these countries to a condition which makes it a subject of contempt with the multitude, and its practice a matter of doubtful propriety with all those who have not yielded to the spirit in which it is now pursued. The term, however, employed to designate an agent of such mischievous and universal dominion, should be defined accurately, that it may be fully understood, and as it is here used in a new sense and for new objects, it may be as well to define it before proceeding farther.

By patronage I mean the promotion of any member of any branch of the medical profession, either by Government, by medical corporations, by religious sects, by political parties, or by authorities acting under them, without having given public proofs of professional superiority over those who claim and have an equally apparent right to promotion. Thus, a man is promoted in the army, in the navy, or in any other department of society, the medical offices of which are under the management of the Crown, the Government, or their agents, without showing that he is in any respect better qualified to hold the situation to which he is appointed, than hundreds of others who look for the same place. In like manner he may be promoted by an university, a college, or an hospital, or be patronized by a sect or by a party, not because he has given proof of the possession of superior abilities and attainments, but because he happens to have what is called better interest than the other candidates, or because he is known to entertain, or, what is more generally the fact, feigns to entertain, certain religious and political principles.

All persons promoted, no matter whether qualified or not, under these circumstances, —that is without giving proofs of superiority to their competitors,—are promoted by what is here called patronage, and by what reason and common sense must call injustice, as shall be shown more fully hereafter.

It is almost unnecessary to enter into an elaborate or detailed exposition of the working of this system. Every one, it is presumed, acquainted with the principle of promotion in the medical profession (and there are many who study this part of the profession well, to the total neglect of the remainder of it), must know that it is not even pretended in the extensive class of appointments alluded to, that the successful applicants are in any way better informed or more highly gifted than those who are disappointed. The offices in the gift of the Crown, the Government, or in that of the persons acting for them, are conferred on individuals who happen to be acquainted with this lord or that lady, who recommends them for promotion to the dispensers of patronage! The appointments of medical corporations, of hospital governors, and of grand juries in Ireland, are conducted much in the same manner; and, what is yet more anomalous, the patronage of society in the form of practice is doled out in the same spirit. Neither is it necessary to produce in this place individual instances in corroboration of these positions; they are so numerous that a volume would not contain a moiety of them,—they are so notorious that they need not be repeated. All I wish you then to recollect in this place is the extraordinary fact, that under the several heads of patronage which I have enumerated, or indeed, that I am aware of in these countries, there is not a single medical situation which can be obtained by merit alone. No man, though he had the whole learning and abilities of the medical profession concentrated in his own person, could get the lowest appointment in Great Britain or Ireland on the strength of those qualifications. He must have other assistance besides professional excellence; and that assistance is seldom of a reputable or honourable character.

The consequences of this state of things on the habits, the morals, the attainments and the fortunes of the members of the medical profession, have been of the most disastrous description. It is obvious that no man in his senses, and with his eyes open to the working of this system, could ever look to his own merits, whether moral or professional, as a means of advancement in life. By this system, therefore, the axe was laid to the very root of all scientific exertion worth speaking of; and of all moral excellence and independence worth possessing. For, to what purpose would the individual who follows the profession of medicine merely for its profits, labour after qualifications which render him no service in the pursuit of his objects?—Or to what end would such a

man cultivate, or even exteriorly observe, those feelings and sentiments which he sees and knows would only unfit him for the mercenary contest in which he is engaged, and which would defeat his own prospects? These, Sir, are the views by which the medical profession of these countries are now directed, with a very few exceptions. Seeing that there is no reaching the goal of exalted success, or of even securing mediocrity of place in the inglorious and mercenary struggle, by honourable means, they fall down and worship the reigning idol of power, of party, of religion, or of fashion, and only vie with each other in sycophancy, hypocrisy, and imposture. Impressed with the necessity of making these disgraceful sacrifices in order to ensure his ends, the aspirant for the favours of patronage commences his career of shame by canting with the saint, collecting for the friar, raving with Lees, repealing with O'Connell, gambling with the profligate, and even getting drunk with the rabble.

This, Sir, is not an exaggerated picture; the scenes to which it refers are of every-day occurrence in the Irish metropolis. They are to be witnessed in the university, the college, the hall, the castle, the church, the chapel, the conventicle, the private house, the public streets,—everywhere. In short, professional turpitude has been elaborated into a practical rule of conduct; and the profession of medicine is made a mask for carrying it into execution on society. The men, too, it is remarkable, who talk most of the advancement of science and the respectability of the profession, and who exclaim loudest against empiricism, are the persons most deeply engaged in these disgraceful practices. These are the individuals who take apprentice-fees without giving, or being able to give, one particle of scientific instruction; who make use of the funds of a public institution as if they were their own private property; who fill the newspapers, and shop-windows, and placard every wall, with advertisements of lectures which are never to be delivered; and who have made posting through the streets at a rate which renders them really dangerous, a means of obtaining notoriety. These men, indeed, may endeavour to draw a line of distinction between themselves and Eady, and Goss, and Lamert,—between those who avow themselves as empirics in practice and profession; but the difference, if any there be, is certainly in favour of the men who do not add dissimulation and hypocrisy to the guilt of robbing, and oftentimes of ruining the health of, the public.

In the representation which has been here given of the state of the medical profession, you, Sir, I have no doubt, will not fail to recognise the operation and effects of that system which I have ventured to call medical patronage,—a system, the baneful results of which it has cost you so much time and labour to develop and place on public record, and for which it still remains for you to provide an efficient remedy. I have no doubt, indeed, but you will also come to the conclusion that the existence of such a system is totally incompatible with the success of any scheme of medical reform which may be devised, but which does not include the destruction of this prolific source of evil among its clauses. Without the complete removal of this great source of abuse, ignorance, empiricism, and demoralization, no plan of medical government can possibly succeed. To this point I would most earnestly call your attention. From the observations which have been here made it is, I presume, self-evident that all the energies of the medical profession have taken a wrong direction, for the obvious reason, that merit cannot of itself succeed —that worthlessness may, and generally does, obtain the highest rewards in medicine. In this inversion of the natural and equitable course of attaining eminence in the profession, lies the whole secret of its degradation and its cure. According to the present order of things, the wreath of scientific superiority is at the disposal of persons who are neither qualified nor inclined to confer it on the deserving;—chance, ignorance, turpitude, may win it —may enjoy it; but neither virtue, nor capacity, nor erudition, of themselves, avail the possessor of them to obtain the prize.

In what manner these conditions of professional life may be changed, – how every man may be made his own patron,—how the crown of victory may be placed within the reach of him who contends for and deserves it, I find I must defer discussing.

I have the honour to be, &c.,
ERINENSIS.

Were you ever a candidate at Guy's?—Yes, once, for the office of assistant-physician.—With whom does the appointment rest?—With the governors, nominally, but really with the treasurer; the governors told me, without scruple, that they always listened to the nomination of the treasurer.—Did you succeed?—No.—Why?—There was a pupil at the hospital in favour with the treasurer; he had not taken a degree in physic; but the treasurer put off the election until he obtained the degree, and then got him the appointment.—*Dr. Yelloly's Evid. before Parl. Com.*

THE LANCET.

London, Saturday, Nov. 29, 1834.

A SUBJECT enveloped in greater difficulties than the Anatomy question was never brought before Parliament. A variety of circumstances had for a long time tended to make the public regard the business of dissection as a revolting and an odious occupation. The most prominent of these were to be found, as may readily be supposed, in the depredations committed by the resurrectionists in the tombs of the dead, and in the handing over to anatomists, by the executioner on the scaffold, of the bodies of strangled malefactors.

Such was the state of the public mind produced by the concurrent operation of the foregoing causes, that the proposal for allowing the remains of unclaimed persons to be dissected, was one of the boldest ever made in Parliament. The bill which was first introduced into the House of Commons some years ago, was almost necessarily defective, from the novelty of the subject, the prejudices which had to be encountered, both in and out of the House, and the interested intrigues and caballings of the chartered monopolists. Had *that* bill been enacted, the evils which it was avowedly designed to remove, would have been increased tenfold, and it is possible that ere this the practice of dissection, unless under particular circumstances, would have been interdicted altogether. That measure, however, passed the Commons, but it was thrown out in the House of Lords, though not until a petition from the Editor of this Journal had been presented to that House, and read at length, by the Earl of HAREWOOD, explanatory of the conduct of the monopolists. It was shown to this assembly in that petition, that the process of dissection had been carried on without difficulty, and with only a few temporary obstructions, until the College of Surgeons, in 1822 and 23, framed their flagrantly unjust by-laws in favour of the schools connected with the "recognised" hospitals. At that period Mr. EDWARD GRAINGER, an enterprising young man, opened an opposition school in immediate proximity with the Borough hospitals. This was not to be endured by the legitimates of the ancient establishments—by King HARRISON and Company. But in what way was Mr. GRAINGER'S school to be destroyed? One plan only was open for adoption. The resurrectionists were made sinecurists. They were paid by the "regular-course" men to allege, with the customary quantity of oaths,—"that bodies could not be procured, as the burial-grounds were all so vigilantly watched." Thus reasoned the scientific heads of the profession:—"As GRAINGER teaches nothing but anatomy,—if he cannot obtain the materials "for instructing the students in that department of medicine, his occupation "must instantly cease. Without subjects "it is impossible that he can continue his "demonstrations. We will therefore bribe "the resurrectionists into idleness." But the body-snatchers outwitted and outgeneralled their employers. Finding that an *opposition* school was a good thing, they quickly determined that it should not be starved out of existence, and, accordingly, they continued to furnish Mr. GRAINGER with an ample supply of subjects, gratuitously, at a time when not one body could be obtained for anatomical inspection in the dissecting-room of *St. Thomas's Hospital.*

The defeat which the corruptionists experienced on that occasion, was most effectual; but they resolved to make use of other measures, equally dishonourable, in the hope of attaining their object.

There were then issued from the College of Surgeons the nefarious decrees relative to winter courses of dissections; the refusal to "recognise" certificates of dissections performed in the summer appeared; and the astounding announcement was made, that the testimonials furnished by teachers of anatomy in the private schools, would not be "recognised" by the College, unless those schools, respectively, were "recognised" by one of the medical officers of one of the "recognised" hospitals. Thus the attack which in the first instance was made covertly against the establishment of Mr. GRAINGER, was directed in the most open and impudent manner against the conductors of all the private schools of anatomy in the metropolis.

The intrigues respecting the procuration of bodies rapidly multiplied, and the difficulties which some of the smaller establishments had to encounter, led to their speedy and final closure. Subsequently, the discoveries of the atrocities committed by the wretch BURK in Scotland, appeared to be the climax of the offences which could be committed against propriety, decency, and morality, in the chaotic state of the medical schools at that period. The crimes committed in the north were followed in London by the perpetration of others, which, though not so numerous, were equally atrocious. The disclosure of those appalling scenes produced throughout society the utmost alarm. The first principle of nature—self-preservation—having been roused into activity, the prejudices which had long been entertained against dissection began to subside, under an apprehension of the atrocities which might yet be committed, if the Legislature did not interpose to protect the community from the errors of pretenders to medical science, and from the butcheries which had been perpetrated for the caterers to the dissecting rooms.

The circumstances, then, which led to the introduction of the second Anatomy Bill into Parliament, were of such a nature as to obtain for it a patient, if not a respectful, reception. Still, the old prejudices, if they had become somewhat torpid, were not eradicated, and it was necessary that the subject should be approached with the greatest possible delicacy. Accordingly, in a spirit of sound policy and true philosophy, the Bill provided for the repeal of so much of Statute 9, George IV., c. 31, as directed that the bodies of murderers should be dissected. This was a great step towards improvement, and will prove the ground-work of advantages which have not yet had time to ripen into maturity. In other respects the Act, as a measure of experiment, was framed with extreme caution, and great consideration was displayed in dealing with the long-cherished, natural, and we might say commendable, feelings of the community. Instead of ordaining that all unclaimed bodies should actually be given up for dissection by the possessors of them, the Act decreed that the body of an individual should not be submitted to the inspection of the anatomist, if the individual had expressed a repugnance to his or her remains being so disposed of. Further, bodies were not to be removed to the dissecting-rooms until twenty-four hours after death; certificates from medical practitioners were in all cases to accompany the remains; and the persons removing the bodies were to give twenty-four hours notice to the Inspector of the intended removal. The persons receiving the bodies were also required to transmit a notice to the Inspector that they had become possessed of the remains,—the Inspector himself being authorized to visit all the places in which such transactions might occur, and required to present a quarterly return to the Sec. of State of the registries made in discharge of his duties.

Such was the second Anatomy Bill, and that document having received the sanction of the Legislature, such is the Anatomy Act now in force. At the time it was before the Houses of Parliament, we frequently complained, in very urgent terms, of two great omissions in the bill, both of them involving principles of the highest importance with respect to the working of the measure, and the effect it would produce on the public mind. Unfortunately for the cause of science and humanity, what we predicted in theory has been confirmed by practice. It was a prominent source of complaint with us that no provision was made for interdicting, under some severe and certain penalty, *the* BUYING *and* SELLING *of dead human bodies, or making them the subject* OF BARTER. This we urged repeatedly, because the traffic of resurrectionists excited feelings of indescribable horror amongst the public, and was one of the great sources of popular prejudice against dissection, and because, moreover, we foresaw that the rich, chartered, public establishments would be enabled by the aid of their wealth to overreach, outbid, and outbribe, the private establishments in the procuration of subjects.

We were the more pressing for an interdiction of the sale or barter of human flesh, because we foresaw that it would operate most prejudicially with respect to the other great omission, viz.,—the non-bestowal of sufficient powers on the Secretary of State and the Inspectors of Anatomy to ensure a just, impartial, equable supply of bodies to the different schools, public and private. For evidence on both of these points, perfectly conclusive as to the soundness of our arguments, we must refer to the two able letters of Professor QUAIN, who has exposed the chicanery of the respectable conductors of several of the "recognised" establishments. It appears that parties who had agreed to leave the distribution of subjects to the impartial decision of the Inspector, Dr. SOMERVILLE, afterwards secretly contrived to exercise an undue influence with the parochial authorities, and secured a preference in their own favour. The overseers and members of the vestries, however, were not seduced into a *ready* acquiescence with the schemes of the intriguers. Arguments, eloquently enforced in most cases, availed nothing, until they were supported by the agreeable proposal of a solid perceptible advantage to be derived from the compact. "Pray," said the lecturers, "send us your unclaimed; "the interests of science will suffer if "you refuse."—"We know nothing of "*science*," said the vestrymen; "tell us in "what way *we* can be benefited by com-"plying with your request."—"Oh," replied the disinterested supplicants, "if you "will send us all your dead, we will take "into our hospital, and feed and physic, a "large proportion of your sick, and the "survivors shall be sent back to you with-"out a demand for expenses of any kind." —"A bargain!" exclaimed the vestrymen.

And this odious system of barter has been practised to a considerable extent during the whole of this medical session, and during a considerable part of the past! How are the private schools, how are those lecturers who have not the patronage of a King HARRISON, to support *their* establishments against such a scandalous system of competition—such a disgusting practice of BRIBERY and BARTER? It is impossible for them to do so, and the injuries which the heads of the private schools have already sustained, are sufficient to demand the interference of the Legislature in their behalf.

What then is to be done? Why, instead of following the advice of the conceited simpleton, who has soiled a column of the *Morning Post* by his slanders against men whose honesty he cannot appreciate, and

whose abilities he is incapable of estimating, the Inspectors of Anatomy must be empowered, under certain responsibilities, to distribute the bodies according to the number of students of anatomy in the respective schools. With a view of rendering their duty as little obnoxious as possible; in order, also, to remove one of the remaining prejudices against dissections; and for the purpose of utterly eradicating the system of HOSPITAL AND PAROCHIAL BARTER; in order to do this, the SELLING of the dead, or the EXCHANGE of dead bodies for any valuable consideration, should be made a misdemeanor, and the offending parties should be punished by the certain infliction of a heavy fine, or subjected to a short term of imprisonment. The complaints which have been made against the Inspector by the coxcomb in the *Post*, are both stupid and malignant; and he evidently knows no more of the clauses of the Anatomy Act than he does of anatomy. He evidently possesses a head which is incapable of enabling him to form a common opinion on the commonest subject. After racking his brains most strenuously he makes the notable discovery, that with the Inspector of Anatomy rests the cause of the defective and irregular supply of subjects; whereas that officer cannot, under the Act of Parliament, exercise the slightest authority over the parochial officers; nor can he, under that statute, restrain any individual who possesses a dead body from transmitting it to any school which he may think proper to select. It is the absence of this controlling power which is the cause of all the mischief; and it is quite evident that no efficient remedy can be supplied, except through an amendment of the Anatomy Act by the interposition of Parliament.

Things, then, must go on as they are at least for a while, unless the BARTERERS AT THE HOSPITALS assume new characters, by acting like men of integrity. But as we have little hope that the "recognised" lecturers will abide by the terms of any future arrangements which they may enter into with their contemporaries of the minor schools, we must look forward with confidence to an amendment of the Anatomy Act. In the mean time there is an influence which can be exercised with the greatest possible advantage to the rising generation of medical practitioners, and, consequently, to society at large. In the absence of those legal provisions which would enable the Inspector to distribute the subjects with strict impartiality, the medical gentlemen officially connected with parochial and other public institutions, can, by their exertions and interference, effect what it is not in the power of the administrators of the law to accomplish. Under the provisions of the Act, as we have already stated, it is unlawful to dissect the body of any person who, on the bed of sickness, has expressed an objection to that process. All, therefore, is permissive, with respect to the conduct of the relatives and friends of the deceased parties, whilst it is peremptorily decreed that no parochial officer or other person shall subject a body to dissection, contrary to the wishes of the next of kin of the deceased. With such just and ameliorating provisions, no physician or surgeon can object, until the law is amended, to make use of the influence he may possess, for the benefit of the medical schools, where hundreds of young men are eagerly searching after that knowledge which, when obtained, will be employed in mitigating the sufferings of future generations. It is the cause of humanity that supplicates for aid.

Since the foregoing article was written, we have received a letter from Mr. DERMOTT, with reference to the statements of

the writer in the *Morning Post*. His communication is too long for insertion, but we will select some extracts from it for publication next week.

INTERCEPTED LETTER.

[THE DUKE.—ROYAL HOMŒOPATHICISM.]

"DEAR DOCTOR TURNER,—I received all your valuable communications, but the great political changes which have just taken place have so overwhelmed me, so bewildered me, that, to use a common but expressive phrase, I scarcely know whether my head or my heels are uppermost. The deep interest that I take in all that regards our College, makes me very naturally ponder on what will probably become of WARBURTON and his folios of evidence, which were so unfortunately saved at the great conflagration.

"There cannot be a doubt but that the Duke of WELLINGTON will bring forward some *sweeping measures of reform*, and I only fear that in doing this he will carry matters even further than would have been done by the late government. The Duke, indeed, has too much sagacity not to see how the stream of reform is flowing, and in place of making any attempt to stem it, he will embark gallantly, and float along with the tide, taking care, I confidently trust, of the *dangerous rocks and shoals* which he will inevitably meet with in so difficult a navigation. We therefore must expect that the labours of the Medical Committee will meet with great consideration from the new Premier.

"There is another reason which will weigh heavily with him. He is fully aware of the great importance it will be for his Grace's government to have the support of the medical profession generally throughout the empire, not so much from their numerical strength as from the influence which their sentiments cannot fail to produce on the numerous individuals in all ranks of society. Were I, indeed, at the head of the government (which between you and me, my dear friend, there is but little chance of), I would rather have the whole body of medical practitioners in the kingdom to support my cause than all the curates, rectors, and bishops, of the Established Church put together. I cannot presume to say how far the Duke will hearken to or place confidence in any opinions or suggestions of mine on the subject of medical reform, my position with the present court being so different from what it was during the reign of my ever-to-be-lamented friend GEORGE the Fourth. The ready access I had at all times to the presence of that august monarch enabled me to be very useful to the Duke on many little occasions; but I have no such access to King WILLIAM, for he not only dislikes physicians, but he has no predilection for any of those persons who were mixed up with the intrigues of the court of GEORGE the Fourth, particularly with KNIGHTON and myself.

"I am exceedingly annoyed at the QUEEN's not commanding my professional attendance, as it would have given me an excellent opportunity of playing an important political game at this crisis. The last accounts I have received from the Pavilion mention that her Majesty is still persevering in the homœopathic system, and she supposes that she has derived advantage from it. Nothing, however, can be more absurd than her thinking so, or that the QUEEN of ENGLAND should countenance quackery. Her chronic cough is considerably easier, and less troublesome, which her Majesty attributes to having taken the thousandth-part-of-a-grain pill, but which those around her attribute to a blister which Mr. DAVIES judiciously recommended for the chest. Her Majesty's confidence in this absurd system arose from one of her maids being put under it when they were in Germany, and who I suppose thought it necessary to say that she was cured by it, because the German quack doctor was a protégé of the Duke of SAXE WEIMAR, the Queen's brother. Her brother, the Duke, sends her these invisible pills from Germany, and they are such atoms that a quill filled with them lasts her Majesty a couple of months. Her Majesty has also an extraordinary bottle which she *smells* whenever she wants a movement in her royal bowels, and my correspondent tells me that the effect of smelling this bottle is so immediate that her Majesty is obliged to leave the room at a moment's notice. So potent, indeed, and instantaneous are its effects that the KING on seeing her and several of the ladies in waiting taking a sniff one morning, and hurrying out of the room directly afterwards, exclaimed, '*Take care, my dear friend* (the appellation by which he always addresses her), *that you do not kill yourself.*'

'As I am much at a loss for a popular subject for my next oration, I don't think I could do better than make choice of an exposure of the whole trickery of this nefarious homœopathic system, as it would afford a good opportunity of convincing the public, as well as the Duke of WELLINGTON's government, of the important

duties which our College performs for the suppression of quackery, and be a good pretext for upholding our venerable institution. Believe me ever to be,

"Your esteemed friend,

"H. H.

"Nov. 18, 1834."

THE ANATOMY ACT.

SECOND LETTER OF PROFESSOR QUAIN, LONDON UNIVERSITY.

To the Editor of THE LANCET.

SIR,—Before I proceed with any farther remarks on the working of the Anatomy Act, it is due to Mr. Stanley and Mr. Mayo to explain a passage in my former letter, which appears to admit of a construction different from what I intended. After mentioning the resolution come to by the lecturers, it is observed that "there appeared a disposition to depart from the agreement thus entered into." This obviously is not correctly expressed. It was not an "agreement" that was entered into, but a "resolution" passed by a vote, and it was competent for any person to have that resolution set aside or not acted on if he thought fit. I am now glad to find that I was mistaken in supposing any such disposition to exist, and trust this explanation will remove any disagreeable feeling to which the expression may have given rise. The paragraph relative to the authorship of the letter in the *Post* cannot admit of any other construction than that I was (and am still) convinced that neither of those gentlemen "had any thing to do with it;" these are the words employed.

It was a brilliant conception of the writer in the *Post*, and worthy of the cause he espouses, to give something of a party colour to this affair of providing means for studying anatomy in the schools. But what sort of insight into the workings of the machinery of a government, or into the views or motives of men in the business of life, can that person possess who penned such a passage as this—"Nothing but Whig ingenuity could have suggested such a plan of competition as that now instituted between the several schools of London?"

Whiggism, indeed, must be sunk beneath the level of meanness, were it in anywise to be mixed up with such paltry concerns. But when I look a little farther on, and read the paragraph in which this writer's "remedy" is put forth: when I find him anxious that lecturers and teachers should proceed forthwith amongst the parishes, and there bestir themselves, thus committing the supply of the schools to a chance medley—a mere scramble—I can scarcely refrain from observing in his own words, *mutatis mutandis*—that nothing but a body-snatcher's ingenuity could have suggested such a plan of competition amongst the schools; *sed hactenus hæc.*

To recommend exertion sounds well, and seems plausible; it carries something bustling and business-like with it. Let us try this proposal as we would test any other project or hypothesis; let us for a moment suppose it to be adopted, and then consider how it would work. As the past is generally the best guarantee for the future, so an instance of what has already been done, will enable us clearly to see what may be done at a future time; and as exertion has various shades of merit, according to the purposes to which it is directed, I will give you a short essay upon "exertion"—that single word being the theme.

Exertion the first. Not very long after the passing of the Anatomy Act, the board in a neighbouring parish passed a vote permitting unclaimed bodies to be examined anatomically in the *London University*. We did not think after the passing of such a vote that it was necessary to exercise any particular vigilance in the parish, not expecting that any "exertion" would be made to disturb the resolution which the board had come to, at least during the first session. But in a month or two we did hear that an "exertion" was made to induce the board to reconsider their vote; a special claim being set up on behalf of another school. We learned from a member of the board that an application from *King's College* had been presented to them, signed by Mr. Smith, the secretary. I cannot at this distance of time recollect what was required by Mr. Smith; I cannot say whether he asked to have the previous vote set aside in favour of the *King's College*, or merely to be admitted to a participation in common with the University. The matter was discussed at the board, and notwithstanding the active "exertions" which were made, they saw no reason for disturbing the previous arrangement. Upon this "exertion" I shall make no comment, but with your leave I will put a few questions for the consideration of the reader. Is it usual when a party is in possession of anything, no matter what, for another to go and make an offer with a view to the possession of, or participation in, that thing, be it what it may, without giving a notice or intimation of any kind to the party in possession? Would it have been a fitting courtesy, on

the part of the secretary of *King's College*, to have written to the secretary of the University, when he was about to make the application here referred to, giving him an intimation of his intention? Was it not due, in common civility, from the lecturers in *King's College* to those in the *London University*, to have written a note to inform them of their intention to take the opinion of the board again, with a view to alter or reverse it? Why were these courtesies, common-place as they are even in the ordinary intercourse of life, forgotten or omitted? Perhaps they were forgotten; the omission might have been accidental. Be it so; read on.

Exertion the second.—Shortly after the commencement of the present session, a vigorous "exertion" was made in the parish just alluded to, to have the vote in favour of the University school set aside, and a resolution passed in favour of the school in *St. Bartholomew's Hospital*. We received no intimation whatever that any measure of the kind was contemplated, until "exertion" had done all it could effect. We were, however, not the persons to be tripped up so readily, even though taken unawares, and we bestirred ourselves accordingly. The matter was discussed at three or four successive meetings, and whilst much "exertion" was being made on each side, the *King's College* came forward with a similar application. I cannot say whether, on this occasion, the latter institution was represented by Mr. Smith or by whom. It was not for me to make any suggestion to those parties—I mean the applicants on behalf of *King's College* or *St. Bartholomew's Hospital*. I was precluded from holding even any communication with them, inasmuch as, in this instance, as in the former, no intimation was given to me or to any person with whom I am connected, of their intention to make another "exertion" in the parish, or subject the board to the annoyance of another canvass. This "exertion," as well as the former, proved unavailing. The vote remains undisturbed. I mention the circumstance merely to show that if the proposal made by the writer in the *Morning Post* were adopted, and if the lecturers were now directed to start off in a race of competition amongst the parishes, we should be very likely to have a fair share in such a scramble. But is this the sort of competition to which schools and school-men are to be subjected? Are they to be exposed to a collision at once unseemly and indecent? Are the ordinary civilities of life to be forgotten? Are the parochial authorities to be thus exposed to ceaseless solicitation by lecturers and teachers? Is the time which they can spare for the public service to be wasted in attending to applications for altering or rescinding votes which they had passed but a few months before? If this line of conduct were to be pursued by lecturers one to the other, what sort of feeling would grow up between them? In what estimation would they be held by the public? What is the lesson which would be taught to pupils by this sort of conduct? Is it or is it not that when they proceed to their different destinations in life, they may hustle out of their way their rivals and competitors by any means which would serve the purpose and justify the expedients to which they may resort by appealing to the acts of their masters and the examples which they had set them? I do not pause for the answers which any thinking person will give to these questions. They will readily suggest themselves to every man's mind, and present at one view the immediate effects and future consequences which must spring up, were the lecturers all to proceed with their "exertions" amongst the parishes.

Exertion the third.—From barter to purchase is but a step. It is the natural transition which takes place both in the affairs of individuals and of nations in the management of their exchanges with one another. Barter is conducted on the principle of giving a "quid pro quo." I have mentioned some instances of this. When a parish board is called on by a gentleman in the Borough to give up unclaimed bodies to a particular school, because the hospital to which that school is attached affords certain advantages to the parish, is or is not that a case of simple barter? When a gentleman in the city offers to accommodate the sick of another parish in his hospital, is not that offering a "quid pro quo?" Does any great interval separate this primitive sort of barter from the more direct method of purchase? About two years ago, when all the lecturers were "exerting" themselves amongst the parishes, it so happened that Mr. Stanley and Mr. Grainger met together in the board-room of a parish which they had previously canvassed. It was intimated to Mr. Grainger, by a member of the board, that certain advantages were held out to them if they would pass a vote in favour of *St. Bartholomew's Hospital*, viz. that their sick poor would be accommodated in the hospital if the unclaimed bodies were given up to the school. He did not say by whom the offer was made. He concluded his remarks by asking Mr. Grainger whether he could give them any similar accommodation; to which Mr. Grainger promptly replied that he could not. When

the affair took this aspect, Mr. G. naturally enough concluded that a vote would be passed in favour of *St. Bartholomew's Hospital*. But there was a sufficient quantity of good sense and right feeling amongst the members of the board to enable them to see the matter in its proper light, and they passed a vote in favour of the school in *St. Bartholomew's Hospital*, and that in Webb Street.

Matters went on smoothly enough for a while; a certain parish functionary "performed" the usual "undertakings." When the bill for these came in to Mr. Grainger he found a charge made against him of 5*l*., or nearly as much, for each funeral. To this he objected, but was promptly informed that Mr. Stanley made no objection to pay the like sum. The affair was referred to the Inspector, who had the charge reduced to three pounds or guineas. I have merely to add that Mr. Grainger was not called on to pay a second bill. Why was this? it will be asked. I can offer no explanation save this—that we all know there is a considerable difference in the value of a customer at three pounds and one at five, and dull indeed must be the comprehension of him who does not perceive that this sort of "argumentum ad crumenam," disguised in some form or other, will constantly be resorted to when the lecturers proceed to "exert" themselves amongst the parishes. "To this complexion must it come at last."

It will be asked, Why bring these circumstances before the public? I answer, plainly, I have no object save one, viz., to determine a public question;—to ascertain the principle upon which the Schools of Anatomy are to be conducted;—to enable the medical profession, the lecturers on Anatomy, and the friends of the Schools, to decide which of two methods of proceeding they will adopt. By one it is proposed that all the bodies obtained under the provisions of the Anatomy Act shall be distributed amongst the schools according to the number of pupils in each. By the other, it is proposed that the lecturers shall be left to "exert" themselves amongst the parishes in order to obtain supplies in the best manner they can. Upon the determination of this question depends another—whether the profession of the anatomist is to be such as to befit a gentleman, or sunk to that state in which it would be adapted only to the taste and habit of a resurrectionist. Are we to be committed to ceaseless contention? Are we to compass our ends by barter or even by purchase? If I was not deliberately convinced that matters had come to such a pass as to demand imperatively the opinion of the medical profession, of the public, and of the lecturers upon each and every of these questions, I would not have trespassed upon your space or intruded myself upon the attention of your readers. It is not my custom to do either. Neither is it with me a usage, in public or in private, to speak otherwise than with kindness and consideration of my professional brethren. If the tone of these letters be unpleasant to any parties, it has been forced upon me by the line of conduct which has been pursued towards me, and those with whom I am connected. It has been imputed to us that we have sought undue advantages under the Act of Parliament, by secret influence. This report has been studiously propagated in a variety of places. When many persons were disposed to believe it, by reason of the frequency of its repetition, then came out the manifesto urging the adoption of the "remedy," that all the lecturers should start upon a new course of "exertion." Thus we should have been placed in a false position with the public, being represented as a "favoured" school under the influence of Whig ingenuity, and as such, entitled to no consideration under a new order of things. I am, Sir, yours, &c.

JONES QUAIN.

Great Coram-street, Nov. 25th, 1834.

EDINBURGH AND GLASGOW MEDICAL JOBBERS.

To the Editor of THE LANCET.

SIR,—The remark made in a late number of THE LANCET that the appointment of Dr. David Cragie to the Inspectorship of Anatomy for Edinburgh was not a Whig job, is founded on error. It was perhaps not a job of the Edinburgh Whigs, who wished it for one of their own dependants, but Craigie's appointment was, nevertheless, a Whig job. Dr. David Craigie is a person about whose political principles nobody cares, but his appointment to the office above referred to was as complete a job as ever was perpetuated, and it was accomplished through the instrumentality of Dr. Lee, the Lauthian pirate, formerly a "divine," and some time a tutor in the household of Lord Melbourne. Your "Edinburgh Correspondent's" remark on this subject in a late number of THE LANCET, leads me to suspect that he has been humbugged by some of the wily Edinburgh Whigs with regard to Dr. Craigie.

Was it not by intriguing with Lord Melbourne that Dr. Lee got appointed to the Chair of Midwifery in the University of

Glasgow,—which after much shuffling and pioneering he was permitted to decline?

Was not Lord Melbourne Home-Secretary when the Chair of Pathology was most unnecessarily created—and most unjustly made imperative—for John Thomson, of chair-manufacturing notoriety,—a man who never succeeded in teaching one of the many branches of medical science which he professed, nor in obtaining any place but by intrigue?

Was not Lord Melbourne in office when Dr. Turner, the said John Thomson's dependant and quondam "prentice," who had also signally failed as a teacher of surgery, was made Professor of Surgery in the Glasgow University?

Did not Lord Melbourne sanction the sale of the Chair of Clinical Surgery to the highest bidder,—a transaction disgraceful to *all* concerned, and which, if I mistake not, has given a serious blow to the Surgical School of Edinburgh?

John was said by the late Dr. Barclay to be "like a mondewart (a mole) ey houking a lo the grund, and pitting out his nose whare nae une lookit for him;" and, verily, certain plans which he has in his head at present, admirably illustrate the accuracy of Dr. Barclay's remark. John proposes to appear in London next season, during the sitting of Parliament, to endeavour to assist the eel-backed Halford and his party in retarding medical reform,—an object which the immaculate John has much at heart, now that he is a professor, and has the prospect, as he thinks, of seating a son or two in *imperative* chairs. Dr. John Thomson, quondam College of Surgeons Professor,—quondam Professor of Military Surgery,—quondam private Lecturer on the Practice of Medicine,—quondam Hospital Surgeon,—quondam candidate for every vacant Chair in the University,—and *now*, Professor of Pathology, an easy chair placed in the college for *his* particular convenience—Dr. John Thomson, the uncompromising foe of the professors *when a private lecturer*, is *now* the earnest advocate of "Acts and Charters" to empower privileged drones "to interfere with the rights of private teachers and the privileges of medical students."

Should John accomplish his London trip, and succeed in domiciling himself at Holland House (another part of his scheme, which he hopes to achieve through the agency of John Allen, Lord Holland's private Secretary), in order to waylay the Chancellor and out-wit Mr. Warburton, I hope effectual means will be used to counteract views.

PHILO SCOTUS.

Medical Observatory, Edinburgh,
Nov. 1st, 1834.

THE SPY REGULATIONS.

To the Editor of THE LANCET.

SIR,—There are two articles in the last number of THE LANCET on which I trust you will allow me to say a few words, and which, as a member of the medical classes of the University of London, I cannot suffer to remain unnoticed.

First, The report of the late meeting in our theatre of anatomy respecting the recent Regulations of the College of Surgeons having appeared in THE LANCET, it is right that the public should be distinctly informed how it originated.

Notice of the meeting was posted, and information sent to the office of THE LANCET, under direction of a few individuals (it was said of six, but I heard of two only), without the knowledge of any other student, and without the sanction of the Council of the University.

Having briefly stated these facts, I shall not trespass on your columns by making any comment on the meeting or on the responsibility and irregular conduct of those who thus hastily convened it, but conclude this article by stating that the irregularity has met with that disapprobation among the students that it merits. I now beg to call the attention of your readers to the letter from "A Senior Student of the University of London," which appeared in your last Number. He states that "250 medical students, who think and speak for themselves," one and all agree in certain opinions respecting the regulations of the College. Now I take upon myself to say that his statement is gratuitous and untrue. That many are opposed to the regulations, and think them highly oppressive, I doubt not; but I will not suffer the unauthorized and incorrect statement of one who has not the manliness to affix his name to it, to be unanswered. Respectfully yours,

CHARLES LINGEN.

University of London,
Nov. 26th, 1834.

*** Are we to understand from this letter that Mr. Lingen himself is in favour of the spy regulations of the dirty College?—ED. L.

LETTER FROM MR. NAPPER.

To the Editor of THE LANCET.

Sir,—An anonymous correspondent, quite unknown to me, has transmitted to you a report of a quarrel which took place at *Guy's Hospital*, in which I was concerned, vide LANCET, page 299, No. 8. The following is the correct version of

what occurred. Just as the operation was about to be performed, it appeared to me, and to several pupils who were near me, that the dresser alluded to in the report might conveniently change his position, without interfering with any of his duties as an assistant to the operator, and that he might give his fellow pupils a better opportunity of accurately observing the successive steps of the operation. With this intention, I requested him to move his head a little. My solicitations, however, continuing unheeded, and supposing that my request was not heard, I bent forward, towards him, with the view of touching him slightly on the head with my hat, but not having measured the distance accurately, I struck him rather hard, and certainly with a greater force than I had desired. Feeling that I had done so, I determined to offer him, immediately after the operation, an apology for the liberty thus unintentionally taken, the more especially because we were strangers, but the explanation terminated in a manner certainly not very creditable to the discretion of either party.

I think I may conclude, that this cannot be an affair in any way interesting to your readers in general, and regretting the necessity for occupying so much space in your very valuable journal, which might be otherwise better and more profitably employed in conveying useful professional information, I have the honour to subscribe myself, sir, your much obliged and humble servant,

T. NAPPER.

Guy's Hospital, Nov. 25, 1834.

MR. LISTON.

Farewell Dinner given to this Gentleman on his Departure from Edinburgh for the Hospital of the London University.

A PUBLIC dinner was given on Friday the 21st inst., at the *Hopetoun Rooms*, Edinburgh, to Mr. LISTON, in consequence of his intended departure from that city to assume the office of surgeon at the London University Hospital in this metropolis, when about 300 gentlemen assembled to participate in the proceedings. The LORD PROVOST took the chair, with Mr. Liston, Sir George Warrender, Dr. Mackintosh, and other celebrated gentlemen on his right: and the Earl of Buchan, Sirs D. Baird and G. Ballingall, Professor Wilson, &c., on his left. We select the following notes of the speeches from a very long account of the proceedings which appears in the *Edinburgh Evening Post* of the 22nd inst. The customary loyal toasts having been drunk,—

The CHAIRMAN rose, and requested a bumper for their distinguished guest. For a century and a half Edinburgh had been eminent as a school of medicine, in proof of which he had only to recall to their recollection the names of Pitcairn, Monro, of Cullen, and of Black, as well as those in more modern times of Drs. Gregory, Hope, Home, and Hamilton. But amidst all the talent which encircled the University, in the line of profession which their guest had chalked out for himself, he had many rivals but no equal. He regretted the departure of Mr. Liston. He would not inquire into his motives in going to a southern climate—they all knew that it was not unnatural for Scotchmen to emigrate to the south—and it ought not to be denied to their distinguished guest, who would thus have more opportunity for pursuing his splendid career in the south than he could have in the north. He then proposed "Mr. Liston, with our cordial wishes for his long life, health, and prosperity in all his undertakings." (*Great cheering.*)

Mr. LISTON returned his grateful thanks for the honour conferred upon him by that day's meeting; conscious that it was far above his deserts, he should endeavour by attention to the duties of his profession, to merit the present honour. After mature deliberation, and with the advice of his more immediate friends, he had resolved to enter upon a more extensive field of practice. Whatever success might chance to attend him, it must be accompanied with regret that he had lost the society of so many attached friends as had come forward thus publicly to testify to the British public in the metropolis, that he was entitled to some portion of their confidence, and that his character and conduct in past life had been such as to secure the approbation of an influential portion of his fellow-citizens. After near twenty years' practice in Edinburgh, he left it with a feeling that he had obtained a reward exceeding anything his exertions had merited, and more gratifying than any academical honour. If at any time he had thought, perhaps unjustly, that his services were in any quarters overlooked, this reward was far more than he could have anticipated. For the medical school of the city, he must ever feel a strong attachment; and however reluctant to cease to belong to it, yet he did not feel entitled to decline the offer (an offer the more flattering that it was altogether unexpected) to become connected with one of the most thriving of all the establishments for medical education in

London, and having at the same time laid open to him a more extended sphere for his professional exertions. (Mr. Liston resumed his seat amid great applause.)

Many professional and non-professional toasts followed. The latter we shall omit, as foreign to our purpose. They comprised the compliments usually paid at dinners where men of various duties and professions are agreeably amalgamated. Shortly after the toast last mentioned,—

Dr. MACKINTOSH rose to propose a toast, which he said was of the feminine gender. When he was young a book fell in his way, which professed to instruct raw men how to conduct themselves at meetings like the present. One rule was, that in proposing a lady one should artfully conceal her name, speak of her virtues, graces, and accomplishments, conceal any blemishes she might possess, and beg to propose "the health of the amiable and accomplished daughter of my lord," for instance. The object of his present toast was a lady; one somewhat advanced in life, but still comely to look at, who had nourished and brought up a numerous family, now dispersed in all corners of the world, and who have spread her name over all the habitable earth. (Cheers). "The learned doctor (so says the report) after some further humorous remarks, and paying a high compliment to the professional attainments of Sir George Ballingall, proposed 'the health of *Sir George and the University of Edinburgh*.'"

Sir GEORGE BALLINGALL, in returning thanks, bore testimony to the talents of Mr. Liston, his merits as an operator, and his tact, judgment, self-reliance, and promptitude, in every professional undertaking. He concluded by proposing *Mrs. Liston and family*. Mr. LISTON returned thanks.

Dr. LEWINS rose, and proposed *Prosperity to the Edinburgh Lecturers on Medical Science*, remarking that it was a cause of rejoicing to every lover of science, and every liberal and right-thinking man, to find that certain additional rights and privileges were, by an act of the Legislature, likely to be bestowed upon them. He then alluded to Mr. Liston's career as a student, a practitioner, and a teacher, in terms of high eulogy, and was greeted with much applause. Dr. THATCHER returned thanks.

Sir DAVID BAIRD, having expressed the pleasure he felt that the genius and professional acquirements of Mr. Liston were not lightly appreciated by the intelligence and respectability of Edinburgh, proposed *Dr. Borthwick and the Royal College of Physicians*. Dr. BORTHWICK returned thanks.

Captain CARNEGIE proposed *Professor Lizars and the Royal College of Surgeons*.

Professor LIZARS was sure that the compliment was intended more for the College than himself, for whom he returned thanks. For the College he begged to say, that the princely edifice of that learned body had lost one of its colossal pillars by the removal of their guest, and it would require them to foster talent as they had hitherto done, in order to fill up the niche. Having returned thanks for the College,—

The CHAIRMAN gave the *Royal Infirmary and its Medical Officers*. Dr. SHORTT returned thanks.

Dr. CAMPBELL—Engaged as they were in the common cause of endeavouring to advance medical science, he wished to dedicate a toast to the health of the medical officers of an institution situated in a rival school of medicine—connected with the proceedings of this night—the Medical Officers of the London Northern Hospital,—gentlemen whose names were well and honourably known in medical science amongst their compeers, in an age when it required no common attainments to become pre-eminent. Having paid high compliments to Mr. Liston, he concluded by giving the *London University and the Medical Officers of the London Northern Hospital*. (Cheers.)

Mr. ROBERTSON (a member of the legal profession), who said he was in some respect conducive to the meeting this day, proposed the health of the venerable father of their guest. Mr. L.'s skill, he had heard it said, as a surgeon was equalled only by his caution, and, notwithstanding all the calumnies which had been uttered against him, he would say that in all the domestic relations of life—and he appealed to his father now present,—no man excelled him. He appealed confidently also to the chambers of the sick for proofs of his kind manners. If his voice were somewhat harsh amid the annoyances of private life, it was music to the sick man's ear. If his hand was hard as iron and true as steel in the theatre of operation, it was soft as thistledown when applied to the throbbing pulse, or the aching brow. Let it not be said that any man could be truly great in that profession which is distinguished above all others for humanity, if he were not equally endowed with those qualities which adorn the human character in private life. Saying this publicly he had won the father's heart more than by uttering anything in praise of the reverend gentleman himself. (*Loud and cordial cheering.*)

The Rev. Mr. LISTON, in returning thanks, expressed his gratitude for the

uncommon honour conferred on his son. The testimony which was now borne to his son, with regard to his attainments in an honourable profession, might be accepted as an omen of his success in the metropolis. (*Cheers.*)

Dr. ROBERTSON gave *Mr. Warburton, M.P.*, and enlarged upon the eminent services that gentleman had rendered to the science of medicine.

Mr. NEAVES, advocate, gave *Dr. Ewing and the Medical School of Aberdeen.*

Dr. EWING returned thanks.

The Rev. H. LISTON gave the *Country Medical Practitioners*, a most useful and talented class.

Dr. FLETCHER gave the healths of *Sir Charles Bell, Mr. Wardrop, and the Scottish Medical Practitioners of London*, which was drunk with great applause.

Mr. ROBERTSON could not allow the meeting to close without proposing the health of a young man who had been one of the most zealous assistants of their guest,—*Mr. Miller.* (*Applause.*)

Mr. MILLER returned thanks.

The meeting separated at half-past eleven o'clock, delighted with the dinner and wines, and the social feelings which prevailed throughout the evening.

ST. BARTHOLOMEW'S HOSPITAL.

COMPOUND FRACTURE OF THE LEG.—VARIOUS OPERATIONS.—DEATH.

ON Saturday, Nov. 8th, William Bow was brought into the hospital with a compound fracture of the bones of the right leg, occasioned by a fall in repairing a house. On examining the limb a small wound was found at the anterior part of the small of the leg, from which blood constantly flowed. After some hours, the house-surgeons considering, from the quantity and florid colour of the blood, that an artery of some size was wounded, sent for Mr. EARLE, who, after a careful investigation of the injury, enlarged the external wound, with a view of exposing the extent of the mischief. Three portions of bone were then detached from the main shaft. There was some difficulty in removing these, from the circumstance of their contiguity to an artery of considerable size, which, for the space of an inch, was bare, and, after the removal of the splintered bones, lay pulsating at the bottom of the wound. This vessel Mr. EARLE considered to be the anterior tibial One of the pieces of bone which Mr. E. took away was between two and three inches long; the sharp edges of bone which projected into the wound were then cut off with the bone-forceps, and the patient was ordered to be kept quiet. The oozing from the wound at this time was very inconsiderable, though warm sponging was used for several minutes. The limb was put up in the usual manner, with a compress of lint on the mouth of the wound.

16th Nov. On Sunday afternoon about two o'clock Mr. SKEY was called in in consequence of considerable hemorrhage, to the amount of nearly three pints; the bleeding continued until the tourniquet was applied, after which the man was taken up into the operating-room. A lacerated wound was then exposed, about four inches in length, a little behind the inner side of the tibia, the upper end of which was about six inches above the ankle; the operator determined to tie the injured vessel, if it could be done without much difficulty or loss of time, rather than remove the leg,—the indication then being to arrest, as soon as possible, the hemorrhage, which already had very much reduced the patient. Mr. SKEY commenced by enlarging the upper end of the wound a little backwards, supposing from its direction that the *posterior* tibial artery was bleeding, though the *anterior* was first thought to have been exposed by the accident. The cavity of the wound exhibited the flexor digitorum nearly divided, and opposite the fractured tibia the posterior tibial nerve lying at the bottom, but pushed somewhat backwards towards the soleus; the wound was covered with lymph, and pus was infiltrated throughout, both in the direction of the calf and towards the heel. When the cavity was sponged dry, the orifice of the posterior tibial artery was apparent at the upper part of that portion which was exposed, and its open mouth was visible to a few of the bystanders. The tourniquet being then loosened, a gush of arterial blood took place, which filled the wound, and set at rest all speculations as to the source of the hemorrhage. A single ligature was then put around the vessel, and the bleeding immediately ceased. The patient seemed then sinking rapidly, his pulse was imperceptible; an ounce of brandy was given him, and he was sent to bed, where he soon rallied under the use of stimuli, and the continued administration of strong beef-tea and ammonia.

After the operation Mr. SKEY observed, "That he believed the artery was divided by the original accident; at least it appeared to him *to be discontinued to the extent of an inch and a half or two inches*, or *to be diverted from its course*, by the violence of the accident. The nerve was apparent enough, but the artery, which in that posi-

tion of the limb ought to lie on it, could not be followed beyond its open orifice at the upper part of the wound. Under ordinary circumstances it would of course be desirable to put a ligature around the lower end also; but he refrained from this on two accounts; *first*, because the man appeared sinking fast, before he was removed from the operating table; and *secondly*, because it had required eight days to remove the coagulum from the upper end, and it was not probable that the current flow of the circulation would be likely to lead to hemorrhage at that period, and in the weakened condition of the patient. But at all events he judged it expedient that the dresser should sit up with him, and keep a loose tourniquet on his limb. There was no appearance of sloughing to lead to the supposition that the artery had been opened by that process."

On Wednesday, the 19th, the wound had assumed such an unhealthy appearance, that it was thought proper to remove the limb. The poor fellow, at this time, was sadly reduced, and the fœtor arising from the leg was quite overpowering. Mr. EARLE performed the operation above the knee in from twelve to fifteen minutes. Mr. E, after the removal of the patient, said, that, as it was his intention to give a clinical lecture on the following day, he would to-morrow make observations on the case, when he should be better prepared to do so, as the limb would then be dissected, and the real nature of the injury ascertained.

The examination was conducted by Messrs. STANLEY and SKEY, when it was discovered that all the surfaces were covered with lymph. The ligature was found upon the posterior tibial artery, immediately above an opening in it, and from this point the artery, with its veins, *turned backwards behind the nerve*, and were in the rest of their extent thickly coated with lymph, in which indeed they were quite imbedded. A small pin-hole aperture was found in the *anterior tibial artery*, which was occupied by a *spicula* of bone.

At Mr. EARLE's clinical lecture, at which Mr. SKEY was present, the former gentleman, in describing the case, observed that the bleeding from the wound had ceased *from the time Mr. Skey had been sent for*, and that no hemorrhage of consequence had occurred directly preceding the application of the ligature around the vessel.

This statement, Mr. Skey, immediately rising, begged to observe was not correct, because bleeding, and that to such an extent as would probably have soon carried off the patient, had continued *up to the moment of his securing the artery*, and that, in fact, but a few moments before that operation, on loosening the tourniquet, a quick flow of blood immediately ensued.

Mr. Earle then observed that he must have been misinformed, immediately after which Mr. Skey left the theatre. We understand that Mr. Earle afterwards made allusions to Mr. Skey which implied a doubt of the justice of Mr. Skey's observations, and consequently occasioned some little dissension between the parties, but at an amicable meeting in the *dead-house* which took place some days after, we understand, an explanation resulted, which was satisfactory to both parties.

The operations and the injury subsequently proved too much for the poor sufferer's strength, and the sequel of such protracted misery was death,—on Tuesday last.

QUACK MEDICINE "FOR GONORRHŒA."—*To the Editor.*—Sir, as you have always been the avowed enemy of every kind of empiricism, permit me to inform the profession and public through the medium of your valuable work, that having analysed a quack medicine frequently puffed in the daily papers as "an infallible remedy for gonorrhœa" &c. under the title "*Specific Extract*," and sold in the neighbourhood of Langham church, I find it to be nothing else than balsam of copaiba, opium, and molasses, boiled down to the consistence of a fluid extract, and perfumed with some essential oils. This is the panacea that is to cure gonorrhœa in all its stages, to relieve chordee, sympathetic bubo, swelled testicle and gleet!!! I need not expatiate on the harm frequently done by the injudicious exhibition of large doses of copaiba and opium, and consequently by the use of such a nostrum; but as I think the most effectual way to put down quackery is to expose it in every possible case, I have taken the liberty to inform you of this, and hope the favour of an early insertion; remaining with due regard, sir, your most obedient servant and constant reader,

EDWARD MELVILLE, M.D.

Brompton Row,
Nov. 20, 1834.

LEECH-BITES.—*To the Editor.*—Sir,—The following is the method that I have adopted for the last five years in arresting hemorrhage from leech-bites, and I decidedly think that it possesses great advantages, as it has succeeded when the plaster of Paris has been ineffectual. Cut from rather fine linen as many pieces as you may require, of half an inch square

each, and place one over each bleeding orifice. When it is perfectly wetted with blood, it should be pressed to the skin, and at the same time a dossil of lint, or any absorbing substance, brought to a point, must be applied to the centre of the linen; the fresh blood being thus taken from the edges, they are allowed to dry and become firm. From this period only one drop oozes through the centre of the linen, and immediately coagulates. I have found this plan simple, never-failing, and always accessible; whereas the plaster of Paris, more especially upon the chest and abdomen, from their constant motion, has repeatedly failed, and is not so readily to be procured. In other hands it has also met with similar success; and as many as fifteen leech-bites have been checked in bleeding within ten minutes. I have the honour to be your obedient servant,

C. F.

New Kent-Road, Nov. 24th.

LANCET EDITION

OF THE

PARLIAMENTARY MEDICAL EVIDENCE.

Part I., containing 320 closely-printed octavo pages, will be completed (in a few days) on the publication of the Ninth weekly Number, when the evidence relating to the College of Physicians will be concluded; forming a complete volume relative to the history and proceedings of that institution. The evidence of the following witnesses will be found in Part I.:—

Dr. F. Hawkins.	Dr. Stanger.
Sir H. Halford.	Dr. A. Tweedie.
Dr. Macmichael.	Dr. Copland.
Dr. Seymour.	Dr. Henderson.
Dr. Waterfield.	Dr. Farre.
Dr. Warren.	Sir Wm. Knighton.
Dr. Wilson.	Dr. Birkbeck.
Dr. Elliotson.	Dr. James Johnson.
Dr. Billing.	Dr. J. Clark.
Dr. Burrows.	Dr. F. H. Ramadge.
Dr. Clendinning.	Dr. Haviland.
Dr. Sims.	Mr. Willcock.
Dr. Arnott.	Sir Charles Clark.
Sir D. Barry.	Sir Charles Bell.
Sir Geo. Tuthill.	Dr. Locock.
Dr. Paris.	Dr. Yelloly.
Dr. Hume.	Dr. E. Harrison.
Dr. H. Holland.	Dr. J. Kidd.

To the Editor,—Sir,—A short time since an advertisement appeared on the cover of THE LANCET from a person desirous of becoming an assistant to a general practitioner. Amongst other of his qualifications named, was that of his being well acquainted with midwifery, having received his obstetric education from me. I should not have deemed the circumstance worthy of notice, but for the impression which seems to have been made on the minds of some (and which I have only recently discovered) that the advertisement appeared under my sanction. I beg to state that I have no knowledge whatever of the advertiser, and therefore the advertisement could not have been inserted with my concurrence, directly or indirectly. If you will have the goodness to give this hasty communication a corner in the pages of your widely-circulated Journal, you will greatly oblige, Sir, your obedient servant,

G. JEWEL.

Sackville-street, Nov. 25, 1834.

SIR,—The Examiners at the College of Surgeons think they have made a great advance in reform by strewing their table with bones, at once to terrify and test the quaking candidates for their diploma. These bones at the examinations are a late addition. Their production before the student was the result of a cry of "Mr. Warburton's at the door," just as naughty children used to be made good by "Boney's a-coming." Two or three weeks since it was debated at the Board whether candidates should not henceforth be examined on the "greater operations," Mr. GUTHRIE being the most earnest party for the motion, and Sir ASTLEY COOPER the most determined against it. The baronet carried the day, on the ground that subordinate practitioners never had to perform those operations.—X.

Sir,—Your friend Halford obtains occasional opportunities of preserving his peculiarly terse and scientific style of bulletin-writing from losing its character by neglect. An instance is before me in the *Court Circular* of the 25th inst., and I extract it as worthy of its predecessors. "The Duke of Gloucester is considered to be *going on well*." Sir Henry attends him daily.—P.

Mr. J. Spender, of Bath, has in the press, and designs to publish in two months, a work entitled,—"Observations on the Causes and Treatment of Ulcerous Diseases of the Leg."

WE have no room this week either to insert the communications or reply to the queries of numerous Correspondents whose letters have lately reached us.

ERRATUM.—In the communication inserted under the head of "St. George's Hospital," page 333, line 24, the word *mother* was misprinted for *brother*; consequently the preceding title of *Amazonian* had better be converted into *hero*.